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FIRST LINES

OF THE

PRACTICE OF PHYSIC.

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BY

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BY
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FIRST LINES

OF THE

PRACTICE OF PHYSIC.

PART I. BOOK II.

CHAP. XII.

OF THE RHEUMATISM.

433. OF this diſeaſe there are two ſpecies, the one named the Acute, the other the Chronic rheumatiſm.

434. It is the Acute Rheumatiſm which eſpecially belongs to this place, as from its cauſes, ſymptoms, and methods of cure, it will appear to be a ſpecies of phlegmaſia or inflammation.

435. This diſeaſe is frequent in cold, and more uncommon in warm climates. It appears moſt frequently in autumn and ſpring, leſs frequently in winter when the cold is conſiderable and conſtant, and very ſeldom during the heat of ſummer. It may occur, however, at any ſeaſon, if viciſſitudes of heat and cold be for the time frequent.

436. The acute rheumatiſm generally ariſes from the application of cold to the body when any way unuſually warm; or when one part of the body is expoſed to cold while the other parts are kept warm; or, laſtly, when the application of the

cold is long continued, as it is when wet or moiſt clothes are applied to any part of the body.

437. Theſe cauſes may affect perſons of all ages; but the rheumatiſm ſeldom appears in either very young or in elderly perſons, and moſt commonly occurs from the age of puberty to that of thirty-five years *.

438. Theſe cauſes (436.) may alſo affect perſons of any conſtitution; but they moſt commonly affect thoſe of a ſanguine temperament.

439. This diſeaſe is particularly diſtinguiſhed by pains affecting the joints, for the moſt part the joints alone, but ſome-

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* There are many inſtances, however, of rheumatiſm extremely acute in old people.

times affecting alſo the muſcular parts. Very often the pains ſhoot along the courſe of the muſcles, from one joint to another, and are always much increaſed by the action of the muſcles belonging to the joint or joints affected.

440. The larger joints are moſt frequently affected; ſuch as the hip-joint, and knees of the lower, and the ſhoulders and elbows of the upper, extremities. The ankles and wriſts are alſo frequently affected; but the ſmaller joints, ſuch as thoſe of the toes or fingers, ſeldom ſuffer.

441. This diſeaſe, although ſometimes confined to one part of the body only, yet very often affects many parts of it; and then it comes on with a cold ſtage, which is immediately ſucceeded by the other ſymptoms of pyrexia, and particularly by a frequent, full, and hard pulſe.

Sometimes the pyrexia is formed before any pains are perceived: but more commonly pains are felt in particular parts, before any ſymptoms of pyrexia appear.

442. When no pyrexia is preſent, the pain is ſometimes confined to one joint only; but, when any conſiderable pyrexia is preſent, although the pain may be chiefly in one joint, yet it ſeldom happens but that the pains affect ſeveral joints often at the very ſame time, but for the moſt part ſhifting their place, and, having abated in one joint, become more violent in another. They do not commonly remain long in the ſame joint, but frequently ſhift from one to another, and ſometimes return to joints formerly affected; and in this manner the diſeaſe often continues for a long time.

443. The pyrexia attending this diſeaſe has an exacerbation every evening, and is moſt conſiderable during the night, when the pains alſo become more violent; and it is at the ſame time that the pains ſhift their place from one joint to another. The pains ſeem to be alſo increaſed during the night, by the body being covered more cloſely, and kept warmer.

444. A joint, after having been for ſome time affected with pain, commonly becomes affected alſo with ſome redneſs and ſwelling, which is painful to the touch. It ſeldom happens, that a ſwelling coming on does not alleviate the pain of the joint; but the ſwelling does not always take off the pain entirely, nor ſecure the joint againſt a return of it.

445. This diſeaſe is commonly attended with ſome ſweating, which occurs early in the courſe of the diſeaſe; but it is ſeldom free or copious, and ſeldom either removes the pains or proves critical.

446. In the courſe of this diſeaſe the urine is high coloured, and in the beginning without ſediment; but as the diſeaſe advances, and the pyrexia has more conſiderable remiſſions, the urine depoſites a lateritious ſediment. This, however, does not prove entirely critical; for the diſeaſe often continues long after ſuch a ſediment has appeared in the urine.

447. When blood is drawn in this diſeaſe, it always exhibits the appearance mentioned 237.

448. The acute rheumatiſm, though it has ſo much of the nature of the other phlegmaſiæ, differs from all thoſe hitherto mentioned, in this, that it is not apt to terminate in ſuppuration. This almoſt never happens in rheumatiſm; but the diſeaſe ſometimes produces effuſions of a tranſparent gelatinous fluid into the ſheaths of the tendons. If we may be allowed to ſuppoſe that ſuch effuſions are frequent, it muſt alſo happen, that the effuſed fluid is commonly reabſorbed; for it has ſeldom happened, and never indeed to my obſervation, that conſiderable or permanent tumours have been produced, or ſuch as required to be opened, and to have the contained fluid evacuated. Such tumours, however have occurred to others, and the opening made in them has produced ulcers difficult to heal. Vide Stork. Ann. Med. II.

449. With the circumſtances mentioned from 439 to 448. the diſeaſe often continues for ſeveral weeks. It ſeldom, however, proves fatal; and it rarely happens that the pyrexia continues to be conſiderable for more than two or three weeks. While the pyrexia abates in its violence, if the pains of the joints continue, they are leſs violent, more limited in their place, being confined commonly to one or a few joints only, and are leſs ready to change their place.

450. When the pyrexia attending rheumatiſm has entirely ceaſed; when the ſwelling, and particularly the redneſs of the joints, are entirely gone; but when pains ſtill continue to affect certain joints, which remain ſtiff, which feel uneaſy upon motion, or upon changes of weather, the diſeaſe is named the Chronic Rheumatiſm, as it very often continues

for a long time. As the chronic is commonly the ſequel of the acute rheumatiſm, I think it proper to treat of the former alſo in this place.

451. The limits between the acute and chronic rheumatiſm are not always exactly marked.

When the pains are ſtill ready to ſhift their place; when they are eſpecially ſevere in the night-time; when, at the ſame time, they are attended with ſome degree of pyrexia, and with ſome ſwelling, and eſpecially with ſome redneſs of the joints; the diſeaſe is to be conſidered as ſtill partaking the nature of the acute rheumatiſm.

But, when there is no degree of pyrexia remaining; when the pained joints are without redneſs; when they are cold and ſtiff; when they cannot eaſily be made to ſweat; or when, while a free and warm ſweat is brought out on the reſt of the body, it is only clammy and cold on the pained joints; and when, eſpecially, the pains of theſe joints are increaſed by cold, and relieved by heat applied to them; the caſe is to be conſidered as that of a purely chronic rheumatiſm.

452. The chronic rheumatiſm may affect different joints; but is eſpecially ready to affect thoſe joints which are ſurrounded with many muſcles, and thoſe of which the muſcles are employed in the moſt conſtant and vigorous exertions. Such is the caſe of the vertebræ of the loins, the affection of which is named Lumbago; or that of the hip-joint, when the diſeaſe is named Iſchias, or Sciatica.

453. Violent ſtrains and ſpaſms occurring on ſudden and ſomewhat violent exertions, bring on rheumatic affections, which at firſt partake of the acute, but

very ſoon change into the nature of the chronic rheumatiſm.

454. I have thus delivered the hiſtory of rheumatiſm; and ſuppoſe, that, from what has been ſaid, the remote cauſes, the diagnoſis, and prognoſis of the diſeaſe, may be underſtood. The diſtinction of the rheumatic pains from thoſe reſembling them, which occur in the ſyphilis and ſcurvy, will be obvious, either from the ſeat of thoſe pains, or from the concomitant ſymptoms peculiar to theſe diſeaſes*. The diſtinction of rheumatiſm

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* To diſtinguiſh the chronic rheumatiſm from venereal or ſcorbutic pains, is, however, in ſome caſes, extremely difficult, and often requires the utmoſt ſagacity of the practitioner. A due attention to the cauſes of rheumatiſm, recited in the foregoing articles, and a ſtrict examination whether the patient has been ſubjected to theſe cauſes, will ſometimes determine the diſeaſe: but it often happens, that the ſame cauſes which produce rheumatiſm, alſo exacerbate venereal and ſcorbutic pains.

from gout will be more fully underſtood from what is to be delivered in the following chapter.

455. With reſpect to the proximate cauſe of rheumatiſm, there have been various opinions. It has been imputed to a peculiar acrimony; of which, however, in ordinary caſes, I can find no evidence; and, from the conſideration of the remote cauſes, the ſymptoms, and cure of the diſeaſe, I think the ſuppoſition very improbable.

The cauſe of an Iſchias Nervoſa aſſigned by COTUNNIUS, appears to me hypothetical, and is not ſupported by either the phenomena or method of cure. That, however, a diſeaſe of a rheumatic nature may be occaſioned by an acrid matter applied

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No general rules can be delivered on this ſubject; and the practitioner muſt truſt to his own ſagacity for direction in this difficult diagnoſis.

applied to the nerves, is evident from the toothach, a rheumatic affection generally ariſing from a carious tooth.

That pains reſembling thoſe of rheumatiſm, may ariſe from deep-ſeated ſuppurations, we know from ſome caſes depending on ſuch a cauſe, and which, in their ſymptoms, reſemble the lumbago or iſchias. I believe, however, that, by a proper attention, theſe caſes depending on ſuppuration, may be commonly diſtinguiſhed from the genuine caſes of lumbago and iſchias; and, from what is ſaid in 448, I judge it to be at leaſt improbable, that a genuine lumbago or iſchias does ever end in ſuppuration.

456. The proximate cauſe of rheumatiſm has been by many ſuppoſed to be a lentor of the fluids obſtructing the veſſels of the part; but the ſame conſideration as in 241, 1, 2, 3, 4, and 5, will ap-

ply equally here for rejecting the ſuppoſition of a lentor.

457. While I cannot, therefore, find either evidence or reaſon for ſuppoſing that the rheumatiſm depends upon any change in the ſtate of the fluids, I muſt conclude, that the proximate cauſe of acute rheumatiſm, is commonly the ſame with that of other inflammations not depending upon a direct ſtimulus.

458. In the caſe of rheumatiſm, I ſuppoſe, that the moſt common remote cauſe of it, that is, cold applied, operates eſpecially on the veſſels of the joints, from their being leſs covered by a cellular texture than thoſe of the intermediate parts of the limbs. I ſuppoſe further, that the application of cold produces a conſtriction of the extreme veſſels on the ſurface, and at the ſame time an increaſe of tone or phlogiſtic diatheſis in the courſe of them,

from which ariſes an increaſed impetus of the blood, and at the ſame time, a reſiſtance to the free paſſage of it, and conſequently inflammation and pain. Further, I ſuppoſe, that the reſiſtance formed excites the vis medicatrix to a further increaſe of the impetus of the blood; and, to ſupport this, a cold ſtage ariſes, a ſpaſm is formed, and a pyrexia and phlogiſtic diatheſis are produced in the whole ſyſtem.

459. According to this explanation, the cauſe of acute rheumatiſm appears to be exactly analogous to that of the inflammations depending on an increaſed afflux of blood to a part while it is expoſed to the action of cold.

But there ſeems to be alſo, in the caſe of rheumatiſm, a peculiar affection of the fibres of the muſcles. Theſe fibres ſeem to be under ſome degree of rigidity, and therefore leſs eaſily admit of motion; and are pained upon the exertions of it.

It is alſo an affection of theſe fibres which gives an opportunity to the propagation of pains from one joint to another, along the courſe of the muſcles, and which pains are more ſeverely felt in the extremities of the muſcles terminating in the joints, becauſe, beyond theſe, the oſcillations are not propagated.

This affection of the muſcular fibres attending rheumatiſm, ſeems to explain why ſtrains and ſpaſms produce rheumatic affections; and, upon the whole, ſhows, that, with an inflammatory affection of the ſanguiferous ſyſtem, there is alſo in rheumatiſm a peculiar affection of the muſcular fibres, which has a conſiderable ſhare in producing the phenomena of the diſeaſe.

460. Having thus given my opinion of the proximate cauſe of rheumatiſm, I proceed to treat of the cure.

461. Whatever difficulty may occur with reſpect to the explanation given (458. and 459.) this remains certain, that in acute rheumatiſm, at leaſt in all thoſe caſes which do not ariſe from direct ſtimuli, there is an inflammatory affection of the parts, and a phlogiſtic diatheſis in the whole ſyſtem; and upon theſe is founded the method of cure, which frequent experience has approved of.

462. The cure therefore requires, in the firſt place, an antiphlogiſtic regimen, and particularly a total abſtinence from animal food, and from all fermented or ſpirituous liquors; ſubſtituting a vegetable

table or milk diet, and the plentiful uſe of bland diluent drinks.

463. Upon the ſame principle (450.) at leaſt with perhaps the ſame exception as above, blood-letting is the chief remedy of acute rheumatiſm. The blood ought to be drawn in large quantity; and the bleeding is to be repeated in proportion to the frequency, fullneſs, and hardneſs of the pulſe, and to the violence of the pain. For the moſt part, large and repeated bleedings, during the firſt days of the diſeaſe, ſeem to be neceſſary, and accordingly have been very much employed: but to this ſome bounds are to be ſet; for very profuſe bleedings occaſion a ſlow recovery, and, if not abſolutely effectual, are ready to produce a chronic rheumatiſm.

464. To avoid that debility of the ſyſtem, which general bleedings are rea-

dy to occaſion, the urgent ſymptom of pain may be often relieved by topical bleedings; and, eſpecially when any ſwelling and redneſs have come upon a joint, the pain of it may be very certainly relieved by ſuch bleedings: but as the continuance of the diſeaſe ſeems to depend more upon the phlogiſtic diatheſis of the whole ſyſtem, than upon the affection of particular parts, ſo topical bleedings will not always ſupply the place of the general bleedings propoſed above*.

465. To take off the phlogiſtic diatheſis prevailing in this diſeaſe, purging may be uſeful, if procured by medicines which

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* Theſe topical bleedings, however, have, by repeated experience, been found of eſſential advantage, eſpecially when the partial inflammation has been very violent. They are beſt performed by leeches, many of which ought to be applied at once all over the inflamed part.

do not ſtimulate the whole ſyſtem, ſuch as the neutral ſalts, and which have, in ſome meaſure, a refrigerant power *.

Cupping has long been the favourite practice of many phyſicians, but it generally irritates more than the leeches: yet in caſes that require immediate relief, it is preferable to them.

* The Glauber, or Epſom ſalts, are the moſt convenient purges in all caſes of acute rheumatiſm. Either of them may be given ſeparately, or joined with the infuſum ſennæ, as in the following formula:

R. Infuſ. Sennæ, ℥ iii.
Sal. Glauber. ℥ ß.
Tinct. Jalap. ʒ i.
Tinct. Aromat. ʒ ß.
M. f. hauſt.

The more ſuddenly purges operate in acute rheumatiſms, the more efficacious are they generally found: and as large diluting warm thin liquors conſiderably accelerate the operation of all purges, ſuch practice is never to be neglected in theſe caſes. Cream of tartar whey, mixed with twice its quantity of warm water, is a very proper drink to aſſiſt the operation of purges.

Purging, however, is not ſo powerful as bleeding, in removing phlogiſtic diatheſis; and, when the diſeaſe has become general and violent, frequent ſtools are inconvenient, and even hurtful, by the motion and pain which they occaſion.

466. In acute rheumatiſm, applications to the pained parts are of little ſervice. Fomentations, in the beginning of the diſeaſe, rather aggravate than relieve the pains. The rubefacients and camphire are more effectual in relieving the pains; but generally they only ſhift the pain from one part into another, and do little towards the cure of the general affection. Bliſtering, applied to the pained part, may alſo be very effectual in removing the pain from it; but will be of little uſe, except where the pains are much confined to one part.

467. The ſeveral remedies mentioned from 451 to 455, moderate the violence of the diſeaſe, and ſometimes remove it entirely; but they ſometimes fail in this, and leave the cure imperfect. The attempting a cure by large and repeated bleedings is attended with many inconveniences, (ſee 140); and the moſt effectual and ſafe method of curing this diſeaſe, is, after ſome general bleedings for taking off, or at leaſt diminiſhing, the phlogiſtic diatheſis, to employ ſweating, conducted by the rules laid down 168 and 169*.

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* Sweating is moſt effectual in this diſeaſe, when produced by Dover's powder. The doſe of it is 12 or 15 grains, repeated at intervals, of two or three hours, till a ſweat be produced. Diluent drinks are to be uſed with it; and it may be neceſſary to obſerve, that they

468. Opiates, except where they are directed to procure ſweat, always prove hurtful in every ſtage of this diſeaſe *.

469. The

ought to be ſuch as are bland, and by no means ſtimulating; viz. barley water, lintſeed tea, thin water gruel, &c.

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* Notwithſtanding this caution, many practitioners uſe opiates, eſpecially when joined with camphor, to procure ſweats in acute rheumatiſm. This compound never fails to increaſe the phlogiſtic diatheſis, and conſequently muſt be hurtful. In the chronic rheumatiſm, indeed, camphor and opium together form a valuable medicine. The doſe is the following bolus:

R. Camphor. gr. vi.
Sp. Vini, gutt. x.
Opii, gr. i.
Tart. Vitriol. gr. xv.
Syr. q. s. M. f. bolus.

469. The Peruvian bark has been ſuppoſed a remedy in ſome caſes of this diſeaſe; but we have ſeldom found it uſeful, and, in ſome caſes, hurtful. It appears to me to be fit in thoſe caſes only, in which the phlogiſtic diatheſis is already much abated, and where, at the ſame time, the exacerbations of the diſeaſe are manifeſtly periodical, with conſiderable remiſſions interpoſed*.

470. Calomel, and ſome other preparations of mercury, have been recommended

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* Bark is always an ambiguous remedy in rheumatiſm, and on its firſt introduction into practice it was thought to occaſion or induce the diſeaſe. Where-ever an inflammatory diatheſis prevails, the Peruvian bark is always an improper medicine, and it has been found by experience to be manifeſtly hurtful in the beginning, or inflammatory ſtate of rheumatiſm.

ed in the acute rheumatiſm; but I believe they are uſeful only in caſes of the chronic kind, or at leaſt in caſes approaching to the nature of theſe.

471. Having now treated fully of the cure of the acute rheumatiſm, I proceed to treat of the cure of the chronic, which is ſo frequently a ſequel of the former.

472. The phenomena of the purely chronic rheumatiſm, mentioned in 439, and 440, lead me to conclude, that its proximate cauſe is an atony, both of the blood-veſſels and of the muſcular fibres of the part affected, together with a degree of rigidity and contraction in the latter, ſuch as frequently attends them in a ſtate of atony.

473. Upon this view of the proximate cauſe, the general indication of cure muſt be, to reſtore the activity and vigour of

the vital principle in the part; and the remedies for this diſeaſe, which experience has approved of, are chiefly ſuch as are manifeſtly ſuited to the indication propoſed.

474. Theſe remedies are either external or internal.

The external are, the ſupporting the heat of the part, by keeping it conſtantly covered with flannel; the increaſing the heat of the part by external heat, applied either in a dry or in a humid form; the diligent uſe of the fleſh-bruſh, or other means of friction; the application of electricity in ſparks or ſhocks; the application of cold * water by affuſion or immerſion;

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* This, when compared with article 458 and others, ſeems to be a typographical error, and the author meant *warm*. Practice affords many inſtances of chronic rheumatiſms being occaſioned by cold bathing.

merſion; the application of eſſential oils of the moſt warm and penetrating kind; the application of ſalt brine; and, laſtly, the employment of exerciſe, either of the part itſelf ſo far as it can eaſily bear it, or of the whole body by riding or other mode of geſtation.

475. The internal remedies are, 1. Large doſes of eſſential oil drawn from reſinous ſubſtances, ſuch as turpentine *; 2. Subſtances containing ſuch oils, as guaiacum †; 3. Volatile alkaline ſalts; 4. Theſe

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* Turpentine is an extremely heating oil, as indeed are all the eſſential oils: its uſe therefore requires the greateſt caution. The doſe is from 8 to 15 drops on a piece of ſugar. Venice turpentine may be more conveniently given in the form of an emulſion, by diſſolving it in water by means of yolks of eggs. Two ſcruples of turpentine is the ordinary doſe; and when given in this liquid and diluted ſtate, is much preferable to the oil.

† The officinal preparations of guaiacum, are an extract of the wood, a ſolution of the gum in rectified ſpirit,

Theſe, or other medicines directed to procure ſweat, (169.); and laſtly Calomel*, or other preparation of mercury, in ſmall doſes, continued for ſome time.

476. Theſe

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rit, another in volatile alkali, and an empyreumatical oil. The gum may be given in the quantity of 15 or 20 grains for a doſe, either in a bolus, or made into an emulſion with yolk of egg and an ounce or two of water: In larger quantities it is too purgative. The volatile elixir of the Edinburgh Pharmacopœia is an excellent form, as the volatile ſpirit promotes the medicinal virtue of the guaiacum. The doſe of it is from a dram to half an ounce, morning and evening, in any convenient vehicle; a teacupful of milk is the beſt, as it ſheaths in ſome meaſure the pungency of the medicine. Guaiacum is very conveniently joined with rhubarb and magneſia, when we find that ſuch a doſe of it, as is neceſſary for procuring a ſufficient opening, would be too heating. A formula of this kind is deſcribed in the note on article 559.

* Calomel, perhaps, has only been ſerviceable in venereal caſes.

476. Theſe, (463, 464,) are the remedies ſucceſsfully employed in the purely chronic rheumatiſm; and there are ſtill others recommended, as bleeding, general and topical; burning; bliſtering; and iſſues: but theſe appear to me to be chiefly, perhaps only, uſeful when the diſeaſe ſtill partakes of the nature of acute rheumatiſm *.

CHAP.

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* The diet in the cure of chronic rheumatiſm ought to be generous and full. In many caſes, eſpecially among people in poor circumſtances, good living, with two or three glaſſes of ſherry in the day, has cured the diſeaſe without any medicines. One material circumſtance ought not to be omitted: viz. that the cure is much impeded by coſtiveneſs: if, therefore, the guaiacum does not procure two motions in the day, it will be neceſſary to give along with it ſome warm laxative. The tinctura ſacra is a proper medicine in theſe caſes: its doſe is from one to two ounces: As is alſo the elixir ſacrum of the Edinburgh College Pharmacopœia, its doſe may be from a dram to half an ounce, as occaſion may require.

CHAP. XIII.

OF THE

TOOTHACH,

OR

ODONTALGIA.

477. I HAVE formerly conſidered this diſeaſe as a ſpecies of Rheumatiſm, to be treated upon the ſame principles as thoſe delivered in the preceding chapter; but now, from more attentive conſideration, I am led to conſider the

toothach as a diſtinct diſeaſe. Whilſt the moſt of what has been delivered in the laſt chapter proceeds upon the ſuppoſition that the rheumatiſm depends upon a certain ſtate of the blood-veſſels, and of the motion of the blood in them, without this being produced by the irritation of any acrid matter applied; I judge, that in the toothach, though there are often the ſame circumſtances in the ſtate of the blood-veſſels as in the caſes of rheumatiſm, theſe circumſtances in toothach always ariſe from the application of an acrid matter to the nerves of the teeth.

478. This diſeaſe is often no other than a pain felt in a particular tooth, without any inflammatory affection being at the ſame time communicated to the neighbouring parts. This, however, is rarely the caſe; and, for the moſt part, together with the pain of the tooth, there is ſome degree of pain and of inflammatory af-

fection communicated to the neighbouring parts, ſometimes to the whole of thoſe on the ſame ſide of the head with the affected tooth.

479. This inflammatory affection ſeems to me to be always an affection of muſcles, and of the membranous parts connected with theſe, without any tendency to ſuppuration; and ſuch an affection, as is excited by cold in ſimilar parts elſewhere. It is from theſe circumſtances that I conclude the affection to be of the rheumatic kind.

480. It is poſſible that the muſcles and membranes of the jaw may be affected by the ſame cauſes which produce the rheumatiſm in other parts; and it is alſo poſſible, that a rheumatic diatheſis at firſt produced by irritation, may ſubſiſt in the muſcles and membranes of the jaw, ſo that the inflammatory affection may be

renewed by certain cauſes without any new application of acrid matter: but I am perſuaded that either of theſe occurrences are very rare, and I have never been able to aſcertain any caſes of toothach to be of theſe kinds. I conſider it, therefore, as highly probable, that this rheumatic affection of the jaws, which we name toothach, is always dependent upon ſome immediate application of acrid matter to the nerves of the teeth.

481. It is however to be obſerved, that this application of acrid matter does not always excite a pain in the tooth itſelf, or an inflammatory affection of the neighbouring parts; but that it very often operates by producing a diatheſis only; ſo that cold applied to the neighbouring parts does excite both a pain in the tooth, and an inflammatory affection of the nighbouring parts which did not appear before.

There ſeem to be alſo certain ſtates of the body, which operate upon the ſame diatheſis, ſo as to produce toothach. Such ſeems to be the caſe with pregnant women, who are more liable to toothach than other women. There are probably alſo ſome caſes of increaſed irritability which render perſons more ſubject to toothach. Thus women are more liable to the diſeaſe than men, and particularly women liable to hyſteric affections.

482. The acrid matter producing this diſeaſe ſeems to be generated firſt in the hard ſubſtances of the teeth; and as it often appears firſt upon the external ſurface of theſe, it might be ſuſpected to ariſe from the application of external matters to the teeth: but as the production of this acrimony is often begun in the internal cavity of the teeth, where the operation of external matters cannot be ſuſpec-

ted, and as even when it begins upon the external parts of the teeth, the operation of the cauſe is at firſt in a ſmall portion of the teeth only, that it is difficult to ſuppoſe that any matter externally applied could act in a partial manner; ſo it is preſumed that the acrid matter occaſioning the toothach is produced by ſome vice originating in the ſubſtance of the tooth itſelf. When it begins upon the external ſurface, it is on the enamel; but upon the internal ſurface, it muſt be in the bony part. From what cauſes it ariſes in either of theſe ſubſtances, I do not at all know; but I ſuſpect that it often ariſes from ſome more general fault in the fluids of the body. The frequent uſe of mercury, eſpecially when thrown much upon the mouth, and the ſtate of the fluids in ſcurvy, ſeem both of them to give a diſpoſition to a caries in the teeth; and it is poſſible that ſome other acrimonious ſtates of the fluids may have the ſame effect.

483. A caries in ſome part of the teeth, whether ariſing upon their internal ſurface or upon their external, proceeding ſo far as to reach the nerves in the cavity of the teeth, is pretty manifeſtly the cauſe of toothach, and of the firſt attacks of it: but when the cavity of the teeth has been opened, ſo that the external air or other matters can reach that cavity, theſe are often the exciting cauſes of toothach, and ſerve to prove in general, that acrid matters applied to the nerves occaſion the diſeaſe.

484. What is the nature of the matter produced in the caries of the teeth, I do not underſtand, nor have I found any proper corrector of it; but I preſume it to be of the putrid kind, as it often taints the breath with a fetid odour.

485. In the cure of this diſeaſe, a long experience has ſhown, that the extraction of the carious tooth proves the moſt effectual, and very often the only effectual, remedy of the diſeaſe. But as in ſome caſes this extraction is not proper, and as in many caſes it is obſtinately avoided, other means of curing the diſeaſe, or at leaſt of relieving the pain, have been ſought for and much practiſed.

486. Among theſe remedies, thoſe are likely to be the moſt effectual which entirely deſtroy the affected nerve, or at leaſt ſo much of it as is expoſed to the action of the acrid matter in the tooth. When an opening is made into the cavity of the tooth, the nerve of it may be deſtroyed moſt certainly by the actual cautery; and it may alſo poſſibly be done by the application of potential

cauſtics, either of the alkaline or acid kind.

487. When theſe remedies cannot be rendered effectual, relief may often be obtained by diminiſhing the ſenſibility of the nerve affected, by the application of opium, or of the more acrid aromatic oils *, directly to the nerve in the tooth. It appears alſo, that the ſenſibility of the affected nerve may often be for ſometime diminiſhed by the external application of opium to the extremities of thoſe nerves in the ſkin, which are branches of the ſame fifth pair of nerves with thoſe of the teeth.

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* The Oleum Origani is the oil generally uſed for this purpoſe. Great care muſt be taken in uſing either theſe acrid eſſential oils, or the vitriolic or other mineral acids, that no part of them touch the gums.

488. When the diſeaſe conſiſts entirely in a pain of the nerve of the tooth, without any conſiderable affection communicated to the neighbouring parts, the remedies already mentioned are thoſe eſpecially to be employed; but when the diſeaſe conſiſts very much in an inflammatory affection of the muſcles and membranes of the jaw, and when at the ſame time there is little or no acceſs for the above-mentioned remedies to the affected nerve, other meaſures are to be employed for relieving the diſeaſe.

489. If the diſeaſe be attended with any general phlogiſtic diatheſis of the ſyſtem, or with any conſiderable degree of pyrexia, a general bleeding may be uſeful in relieving the diſeaſe; but theſe circumſtances occur very rarely, and the diſeaſe is for the moſt part a purely topical affection; in which, as I obſerved

before, a general bleeding is of very little ſervice. As this diſeaſe, however, is a topical inflammation, it might be ſuppoſed that topical bleedings would be very uſeful, and ſometimes they are ſo; but it is ſeldom that their effects are either conſiderable or permanent. The reaſons of this I take to be, that the diſeaſe does not conſiſt in an affection of the blood-veſſels alone, as in the ordinary caſes of rheumatiſm; but in a peculiar affection of the fibres both of the muſcles and of the veſſels of the part induced by irritation. The inefficacy of topical bleedings is with me a proof of the diſeaſe being of the latter kind.

490. The remedies therefore neceſſary to give relief in this diſeaſe, are thoſe which take off the ſpaſm of the veſſels, and eſpecially of the muſcles and membranes affected. Such are bliſtering,

brought as near to the part affected as can conveniently be done *; and ſuch are alſo increaſed excretions excited in the neighbouring parts, as of the ſaliva and mucus of the mouth by the uſe of acrid maſticatorics †. It is often ſufficient to

excite

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* Bliſters are applied moſt ſucceſsfully behind the ears. Such applications however are always troubleſome; and their effects are often doubtful. Other milder ſtimulants frequently anſwer all the intention of bliſters, and by many practitioners are thought to be equally efficacious. The applications generally uſed are camphorated ſpirit, or volatile alkali. This laſt, either alone, or mixed with an equal quantity of oil of almonds, rubbed on the jaw, the part being kept warm by a piece of flannel, has often been found extremely uſeful.

Warmth, any how produced on the part, always gives relief; while, on the contrary, cold always exaſperates the ſymptoms: hence the propriety of covering the jaws with flannel, and avoiding a cold ſtream of air.

† Theſe are horſe-radiſh, ſcurvy-graſs, the greater celandine, with ſome others; but the radix pyrethri is the

beſt.

excite a ſtrong ſenſation in the neighbouring parts; as by eau de luce, ſpirit of lavender, or Hungary water ſnuffed up the noſtrils; or by the vitriolic æther properly applied to the cheek. It is upon the ſame footing that I ſuppoſe brandy or other ardent ſpirit held in the mouth is often of ſervice.

491. There are caſes of toothach in which it does not appear that the diſeaſe ariſes

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beſt. In ſome pharmacopœia, but I do not recollect which, there is a formula, called Trochiſci Sialagogi, to the beſt of my remembrance, as follows:

R. Pulv. Rad. Pyrethri, ℥ i.
Gum. Maſtich. ℥ ß.
Ol. Caryophyll. Aromat.
Ol. Marjoranæ, āā ʒ i.
Ceræ Alb. q. ſ. ut f. Trochiſci.

One of theſe held in the mouth, or chewed, promotes a copious diſcharge of ſaliva, by warming and ſtimulating the ſalivary glands.

ariſes from an acrid matter immediately applied to the nerve of a tooth; but from the external application of cold, or ſome other cauſes immediately applied to the muſcles and membranes of the jaw; and which therefore ſeem to require ſome remedies different from thoſe above-mentioned. But in all ſuch caſes, it is to be ſuſpected, that the effects of cold or of other ſuch cauſes are owing to a diatheſis produced by an acrid matter applied to the nerve of a tooth, and continuing in ſome meaſure to act there; and we have accordingly often found, that the action of thoſe external cauſes were to be obviated only by the extraction of the tooth from which the diatheſis had ariſen.

CHAP. XIV.

OF THE

GOUT.

492. THE Gout, not only as it occurs in different perſons, but even as it occurs in the ſame perſon at different times, is a diſeaſe of ſuch various appearance, that it is difficult to render the hiſtory of it complete and exact, or

to give a character of it that will univerſally apply. However, I ſhall endeavour to deſcribe the diſeaſe as it moſt commonly appears, and to mark the varieties of it as well as I can. From ſuch a hiſtory I expect that a general character may be given; and ſuch I think is the following, as given in the laſt edition of our Noſology:

GEN. XXIV.

PODAGRA.

Morbus hæreditarius, oriens ſine cauſa externa evidente, ſed præeunte plerumque ventriculi affectione inſolita; pyrexia; dolor ad articulum, et plerumque pedis pollici, certe pedum et manuum juncturis, potiſſimum infeſtus; per intervalla revertens, et ſæpe cum ventriculi et aliarum internarum partium affectionibus alternans.

493. The Gout is generally a hereditary diſeaſe: but ſome perſons, without hereditary diſpoſition, ſeem to acquire it; and, in ſome, a hereditary diſpoſition may be counteracted by various cauſes. Theſe circumſtances may ſeem to give exceptions to our general poſition; but the facts directly ſupporting it are very numerous.

494. This diſeaſe attacks eſpecially the male ſex; but it ſometimes, though more rarely, attacks alſo the female*. The

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† Hippocrates ſays, that women ſeldom have the gout, and never before the diſappearance of the catamenia. In his

The females liable to it are thoſe of the more robuſt and full habits; and it very often happens to ſuch long before the

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his time and country, perhaps, the ladies were more temperate than they were in other ages and in other places. We find the gout a familiar diſeaſe among the Roman ladies; which, Seneca, in his ninety fifth epiſtle, juſtly aſcribes to the luxurious living and debaucheries, in which they indulged without controul.

As the whole of that epiſtle is an excellent account of the direful effects of high-living and debauchery, it may not be unacceptable to the young practitioner, who, perhaps, might otherwiſe be unacquainted with ſo juſt a deſcription of luxurious living, and its concomitant-evils. Independent of its containing a minute relation of Roman cuſtoms, which makes it a valuable morſel for antiquaries, it may be read with peculiar advantage by the young phyſician.

As an apology for giving it in the original, I ſhall ſay of Seneca what an elegant Engliſh writer ſays of Cicero; That any tranſlation of his nervous language, is like the faint the menſtrual evacuation has ceaſed. I have found it occurring in ſeveral females, whoſe menſtrual evacuations were more abundant than uſual.

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faint glimmerings of a taper compared with the blazing light of the meridian ſun.

“ Medicina quondam paucarum fuit ſcientia herba-
“ rum, quibus ſiſteretur ſanguis fluens, vulnera coierent
“ paulatim. Deinde in hanc pervenit tam multiplicem
“ varietatem. Nec mirum eſt : tunc illam minus ne-
“ gotii habuiſſe, firmis adhuc, ſolidiſque corporibus, et
“ facili cibo, nec per artem voluptatemque corrupto. Qui
“ poſtquam cœpit, non ad tollendam, ſed ad irritandam
“ famem quæri, et inventæ ſunt mille conditturæ, quibus
“ aviditas excitaretur : quæ deſiderantibus alimenta erant,
“ onera ſunt plenis. Inde pallor, et nervorum vino ma-
“ dentium tremor, et miſerabilior ex cruditatibus quam
“ ex fame macies. Inde incerti labantium pedes, et ſem-
“ per qualis in ipſa ebrietate titubatio. Inde in totam cu-
“ tem humor admiſſus, diſtentuſque venter, dum male
“ aſſueſcit plus capere, quam poterat. Inde ſuffuſio luri-
“ dæ bilis, et decolor vultus, tabeſque in ſe putreſcen-
tium,

495. This diſeaſe ſeldom attacks eunuchs ; and, when it does, they ſeem to be thoſe who happen to be of a robuſt

“ tium, et retorti digiti articulis obrigeſcentibus, nervorum ſine ſenſu jacentium, torpor aut palpitatio ſine intermiſſione vibrantium. Quid capitis vertigines dicam ? Quid oculorum auriumque tormenta, et cerebri æſtuantis verminationes, et omnia per quæ exoneramur internis ulceribus affecta ? Innumerabilia præterea febrium genera, aliarum impetu ſubeuntium, aliarum tenui peſte repentium, aliarum cum horrore et multa membrorum quaſſatione venientium ? Quid alios referam innumerabiles morbos, ſupplicia luxuriæ ? Immunes erant ab iſtis malis qui nondum ſe deliciis ſolverant, qui ſibi imperabant, ſibi miniſtrabant. Corpora opere ac vero labore durabant, aut curſu defatigati, aut venatu, aut tellure verſata. Excipiebat illos cibus qui niſi eſurientibus placere non poterat. Itaque nihil opus erat tam magna medicorum ſupellectile, nec tot ferramentis atque pyxidibus. Simplex erat ex ſimplice cauſa valetudo. Multos morbos multa fercula fecerunt. Vide quantum rerum per unam gulam tranſiturarum permiſceat luxuria, terrarum mariſque vaſtatrix. Neceſſe eſt itaque inter buſt habit, lead an indolent life, and live very full.

“ inter ſe tam diverſa diffideant, et hauſta mali digeran-
“ tur, aliis alio nitentibus. Nec mirum, quod incon-
“ ſtans variuſque ex diſcordi cibo morbus eſt, et illa ex
“ contrariis naturæ partibus in eundem compulſa redun-
“ dant. Inde tam nullo ægrotamus genere quam vivi-
“ mus. Maximus ille medicorum, et hujus ſcientiæ con-
“ ditor, feminis nec capillos defluere dixit, nec pedes la-
“ borare. Atqui hæ jam et capillis deſtituuntur, et pe-
“ dibus ægræ ſunt. Non mutatâ feminarum natura, ſed
“ vita eſt. Nam cum virorum licentiam æquaverint, cor-
“ porum quoque virilium vitia æquaverunt. Non mi-
“ nus pervigilant, non minus potant, et oleo et mero
“ viros provocant. Æque invitis ingeſta viſceribus per
“ os reddunt, et vinum omne vomitu remetiuntur; æque
“ nivem rodunt, ſolatium ſtomachi æſtuantis. Libidini
“ vero nec maribus quidem cedunt, pati natæ. Dii illas
“ deæque male perdant: adeo perverſum commentæ ge-
“ nus impudicitiæ viros ineunt. Quid ergo mirandum eſt,
“ maximum medicorum ac naturæ peritiſſimum, in menda-
“ cio prehendi, cum tot feminæ podagricæ calvæque ſint.
“ Beneficium ſexus ſui vitiis perdiderunt; et quia femi-
“ nam

496. The gout attacks eſpecially men of robuſt and large bodies, men of large heads, of full and corpulent habits, and

men

“ nam exuerunt, damnatæ ſunt morbis virilibus. Antiqui medici neſciebant dare cibum ſæpius, et vino fulciri venas cadentes; neſciebant ſaniem emittere, et diutinam ægrotationem balneo ſudoribuſque laxare; neſciebant crurum vinculo, brachiorumque, latentem vim, et in medio ſedentem, ad extrema revocare. Non erat neceſſe circumſpicere multa auxiliorum genera cum eſſent periculorum pauciſſima. Nunc autem quam longe proceſſerunt mala valetudinis? Has uſuras voluptatum pendimus, ultra modum faſque concupitarum. Innumerabiles eſſe morbos miraris? Coquos numera. Ceſſat omne ſtudium; et liberalia profeſſi, ſine ulla frequentia, deſertis angulis præſident. In rhetorum ac philoſophorum ſcholis ſolitudo eſt. At quam celebres culinæ ſunt? Quanta nepotum focos juventus premit? Tranſeo puerorum infelicium greges; quos poſt tranſacta convivia aliæ cubiculi contumeliæ expectant. Tranſeo agmina exoletorum per nationes coloreſque deſcripta, et eadem omnibus levitas ſit, eadem primæ menſura lanuginis, eadem ſpecies capillorum, ne quis cui

“ rectior

men whoſe ſkins are covered with a thicker rete mucoſum, which gives a coarſer ſurface.

497. If, with the antients, we might aſcertain, by certain terms, the temperaments of men, I would ſay, that the gout attacks eſpecially men of a *cholerico-ſanguine* temperament, and that it

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" rectior ſit coma, criſpulis miſceatur. Tranſeo piſto-
" rum turbam, tranſeo miniſtratorum, per quos ſigno
" dato ad inferendam cœnam diſcurritur. Dii boni quan-
" tum hominum unus venter exercet ! Quid tu illos bo-
" letos, voluptarium venenum, nihil oculti operis judi-
" cas facere, etiamſi præſentanei non ſurant ? Quid tu
" illam æſtivam nivem non putas callum jecinoribus ob-
" ducere ? Quid illa oſtrea, inertiſſimam carnem, cœ-
" no ſaginatam, nihil exiſtimas limoſæ gravitatis inferre ?
" Quid illud ſociorum garum, pretioſam piſcium ſaniem,
" non credis urere ſalſa tabe præcordia ? Quid illa pu-
" rulenta, et quæ tantum non ab ipſo igne in os trans-
" feruntur, judicas ſine noxa, in ipſis viſceribus extingui ?
" Quam fœdi atque peſtilentes ructus ſunt, quantum fa-
" ſtidium ſui, exhalantibus crapulam veterem ?

very ſeldom attacks the purely ſanguine or melancholic. It is, however, very difficult to treat this matter with due preciſion.

498. The gout ſeldom attacks perſons employed in conſtant bodily labour, or perſons who live much upon vegetable aliment. It is alſo ſaid to be leſs frequent among thoſe people who make no uſe of wine or other fermented liquors.

499. The gout does not commonly attack men, till after the age of five and thirty; and generally not till a ſtill later period. There are indeed inſtances of the gout occurring more early; but theſe are few in compariſon of the numbers which agree with what we have given as the general rule. When the diſeaſe does appear early in life, it ſeems to be in thoſe in whom the hereditary diſpoſition

is very ſtrong, and to whom the remote cauſes to be hereafter mentioned have been applied in a conſiderable degree.

500. As the gout is a hereditary diſeaſe, and affects eſpecially men of a particular habit, its remote cauſes may be conſidered as prediſponent and occaſional.

501. The prediſponent cauſe, ſo far as expreſſed by external appearances, or by the general temperament, we have already marked; and phyſicians have been very confident in aſſigning the occaſional cauſes; but, in a diſeaſe depending ſo much upon a prediſpoſition, the aſſigning occaſional cauſes muſt be uncertain; as, in the prediſpoſed, the occaſional cauſes may not always appear, and in perſons not prediſpoſed, they may appear without effect. This uncertainty muſt particularly affect the

caſe of the gout; but I ſhall offer what appears to me the moſt probable on the ſubject.

502. The occaſional cauſes of the gout ſeem to be of two kinds. Firſt, thoſe which induce a plethoric ſtate of the body. Secondly, thoſe which, in plethoric habits, induce a ſtate of debility.

503. Of the firſt kind are a ſedentary indolent manner of life, a full diet of animal food, and the large uſe of wine and other fermented liquors. Theſe circumſtances commonly precede the diſeaſe; and if there ſhould be any doubt of their power of producing it, the fact, however, will be rendered ſufficiently probable by what has been obſerved in 498.

504. Of the ſecond kind of occaſional cauſes which induce debility are, exceſs in venery *; intemperance in the uſe of intoxicating liquors †; indigeſtion, produced either by the quantity or quality

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* Why exceſs of venery ſhould be a cauſe of gout, has much engaged the attention of medical writers, and various reaſons have been given why it ſhould produce ſuch an effect. There is not the leaſt doubt of the fact, though ſome authors have ventured to deny it, and have excluded the exceſs of venery from being a cauſe of gout.

It produces gout not primarily, but ſecondarily, if I may be allowed the expreſſion, by inducing a general ſtate of debility, and by weakening the power of digeſtion, both of which circumſtances are cauſes of the gout.

† By intemperate drinking the action of the ſtomach and bowels becomes extremely feeble and languid, if it be not wholly deſtroyed; hence continual indigeſtions, to which the origin of the gout is attributed.

quality of aliments *; much application to ſtudy or buſineſs †; night watch-

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* Both the quantity and quality of the aliments may produce indigeſtion : and hence the indulging in too great a quantity of aliment, as well as in that which is of an indigeſtible nature, are ſecondary cauſes of the gout : viz. cauſes which induce a ſtate of debility.

† Much application to ſtudy may doubtleſs induce indigeſtion, and thus increaſe the general ſtate of debility : it is not, however, by intenſe ſtudy, or deep thinking merely, that men grow pale amid their books, but by the ſedentary life which ſtudious men generally lead, and the untimely lucubrations in which they inconſiderately indulge.

Much application to buſineſs can only be an occaſional cauſe of the gout, when the buſineſs requires a ſedentary and inactive life ; but as moſt buſineſs requires activity attention to buſineſs is ſeldom the cauſe of gout.

watching *; exceſſive evacuations †; the ceaſing of uſual labour ‡; the ſudden change from a full to a very ſpare diet §; the large uſe of acids and aceſcents ||; and,

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* The want of ſleep is always a cauſe of indigeſtion, and increaſes debility more perhaps, when carried to exceſs, than any other of the circumſtances mentioned by the author.

† That large evacuations induce debility is ſufficiently evident.

‡ Nothing more effectually promotes digeſtion than proper exerciſe; the leaving off accuſtomed labour muſt therefore neceſſarily induce indigeſtion, and conſequent debility.

§ Why this induces debility is evident. See note on article 549.

|| That acids, by impairing the digeſtive powers of the ſtomach, may produce debility, is what every practitioner allows.

and, laſtly, cold * applied to the lower extremities.

505. The firſt (503.) ſeem to act by increaſing the prediſpoſition. The laſt (504.) are commonly the exciting cauſes, both of the firſt attacks, and of the repetitions of the diſeaſe.

506. It is an inflammatory affection of ſome of the joints which eſpecially conſtitutes what we call a paroxyſm of the gout. This ſometimes comes on ſuddenly without any warning, but is generally preceded by ſeveral ſymptoms; ſuch as the ceaſing of a ſweating which the feet had been commonly affected with before; an unuſual

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* How cold, thus applied, can produce a ſtate of debility, is not very evident. It is, however, one of the occaſional cauſes of gout, as experience ſufficiently teſtifies.

uſual coldneſs of the feet and legs; a frequent numbneſs, alternating with a ſenſe of prickling along the whole of the lower extremities; frequent cramps of the muſcles of the legs; and an unuſual turgeſcence of the veins.

507. While theſe ſymptoms take place in the lower extremities, the whole body is affected with ſome degree of torpor and languor, and the functions of the ſtomach in particular are more or leſs diſturbed. The appetite is diminiſhed, and flatulency, or other ſymptoms of indigeſtion, are felt. Theſe ſymptoms, and thoſe of 506, take place for ſeveral days, ſometimes for a week or two, before a paroxyſm comes on: but commonly, upon the day immediately preceding it, the appetite becomes greater than uſual.

508. The circumſtances of paroxyſms are the following. They come on moſt commonly in the ſpring, and ſooner or later according as the vernal heat ſucceeds ſooner or later to the winter's cold; and perhaps ſooner or later alſo according as the body may happen to be more or leſs expoſed to the viciſſitudes of heat and cold.

509. The attacks are ſometimes felt firſt in the evening, but more commonly about two or three o'clock of the morning. The paroxyſm begins with a pain affecting one foot, moſt commonly in the ball or firſt joint of the great toe, but ſometimes in other parts of the foot. With the coming on of this pain, there is commonly more or leſs of a cold ſhivering, which, as the pain increaſes, gradually ceaſes, and is ſucceeded by a hot ſtage of py-

rexia, which continues for the ſame time with the pain itſelf. From the firſt attack, the pain becomes by degrees more violent, and continues in this ſtate with great reſtleſſneſs of the whole body, till next midnight, after which it gradually remits; and after it has continued for twenty-four hours from the commencement of the firſt attack, it commonly ceaſes very entirely, and, with the coming on of a gentle ſweat, allows the patient to fall aſleep. The patient, upon coming out of this ſleep in the morning, finds the pained part affected with ſome redneſs and ſwelling, which, after having continued ſome days, gradually abate.

510. When a paroxyſm, has thus come on, although the violent pain after twenty-four hours be conſiderably abated, the patient is not entirely relieved from it. For ſome days

he has every evening a return of more conſiderable pain and pyrexia, and which continue with more or leſs violence till morning. After continuing in this manner for ſeveral days, the diſeaſe ſometimes goes entirely off, not to return till after a long interval.

511. When the diſeaſe, after having thus remained for ſome time in a joint; ceaſes very entirely, it generally leaves the perſon in very perfect health, enjoying greater eaſe and alacrity in the functions of both body and mind than he had for a long time before experienced.

512. At the beginning of the diſeaſe, the returns of it are ſometimes only once in three or four years: but, after ſometime, the intervals become ſhorter, and the attacks become annual,

nual; afterwards they come twice each year, and at length recur ſeveral times during the whole courſe of autumn, winter, and ſpring; and as it happens that, when the fits are frequent, the paroxyſms become alſo longer, ſo, in the advanced ſtate of the diſeaſe, the patient is hardly ever tolerably free from it, except perhaps for two or three months in ſummer.

513. The progreſs of the diſeaſe is alſo marked by the parts which it affects. At firſt, it commonly affects one foot only; afterwards every paroxyſm affects both feet, the one after the other; and, as the diſeaſe continues to recur, it not only affects both feet at once, but after having ceaſed in the foot which was ſecondly attacked, returns again into the foot firſt affected, and perhaps a ſecond time alſo into the other. Its changes of place are

not only from one foot to the other, but alſo from the feet into other joints, eſpecially thoſe of the upper and lower extremities; ſo that there is hardly a joint of the body that is not, on one occaſion or other, affected. It ſometimes affects two different joints at the ſame time; but more commonly it is ſevere in a ſingle joint only, and paſſes ſucceſſively from one joint to another; ſo that the patient's affliction is often protracted for a long time.

514. When the diſeaſe has often returned, and the paroxyſms have become very frequent, the pains are commonly leſs violent than they were at firſt; but the patient is more affected with ſickneſs, and the other ſymptoms of the atonic gout, which ſhall be hereafter mentioned.

515. After the firſt paroxyſms of the diſeaſe, the joints which have been affected are entirely reſtored to their former ſuppleneſs and ſtrength: but after the diſeaſe has recurred very often, the joints affected do neither ſo ſuddenly nor ſo entirely recover their former ſtate, but continue weak and ſtiff; and theſe effects at length proceed to ſuch a degree, that the joints loſe their motion altogether.

516. In many perſons, but not in all, after the diſeaſe has frequently recurred, concretions of a chalky nature are formed upon the outſide of the joints, and for the moſt part immediately under the ſkin. The matter ſeems to be depoſited at firſt in a fluid form, but afterwards becomes dry and firm. In their dry ſtate, theſe concretions are a friable earthy ſubſtance, very

entirely ſoluble in acids. After they have been formed, they contribute, with other circumſtances, to deſtroy the motion of the joint.

517. In moſt perſons who have laboured under the gout for many years, a nephritic affection comes on, and diſcovers itſelf by all the ſymptoms which uſually attend calculous concretions in the kidneys, and which we ſhall have occaſion to deſcribe in another place. All that is neceſſary to be obſerved here is, that the nephritic affection alternates with paroxyſms of the gout, and that the two affections, the nephritic and the gouty, are hardly ever preſent at the ſame time. This alſo may be obſerved, that children of gouty or nephritic parents, commonly inherit one or other of theſe diſeaſes; but whichever may have been

the principal diſeaſe of the parent, ſome of the children have the one, and ſome the other. In ſome of them, the nephritic affection occurs alone, without any gout ſupervening; and this happens to be frequently the caſe of the female off-ſpring of gouty parents.

518. In the whole of the hiſtory already given, I have deſcribed the moſt common form of the diſeaſe; and which therefore, however diverſified in the manner I have ſaid, may be ſtill called the regular ſtate of the gout. Upon occaſion, however, the diſeaſe aſſumes different appearances *; but,

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* Theſe different appearances which the gout aſſumes, are extremely unlike the regular gout above deſcribed: the

but, as I ſuppoſe the diſeaſe to depend always upon a certain diatheſis or diſpoſition of the ſyſtem; ſo every appearance which we can perceive to depend upon that ſame diſpoſition, I ſtill conſider as a ſymptom and cauſe of the gout. The principal circumſtance in what we term the *Regular Gout*, is the inflammatory affection of the joints; and, whatever ſymptoms we can perceive to be connected with, or to depend upon, the diſpoſition which produces that inflammatory affection, but without its taking place, or being preſent

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the young practitioner ought therefore to pay peculiar attention to them, that when he obſerves them in patients, he may not think them ſymptoms of other diſeaſes, or even miſtake them for primary diſeaſes. Errors of this kind are frequently committed by ignorant practitioners, to their own diſcredit and the danger of their patient's life.

ſent at the ſame time, we name the *Irregular Gout.*

519. Of ſuch irregular gout there are three different ſtates, which I name the *atonic*, the *retrocedent*, and the *miſplaced* gout.

520. The atonic ſtate is when the gouty diatheſis prevails in the ſyſtem, but, from certain cauſes, does not produce the inflammatory affection of the joints. In this caſe, the morbid ſymptoms which appear are chiefly affections of the ſtomach; ſuch as loſs of appetite, indigeſtion, and its various circumſtances of ſickneſs, nauſea, vomiting, flatulency, acid eructations, and pains in the region of the ſtomach. Theſe ſymptoms are frequently accompanied with pains and cramps in ſeveral parts of the trunk, and the upper extremities of body, which are reliev-

ed by the diſcharge of wind from the ſtomach. Together with theſe affections of the ſtomach, there commonly occurs a coſtiveneſs; but ſometimes a looſeneſs with colic pains. Theſe affections of the alimentary canal are often attended with all the ſymptoms of hypochondriaſis; as dejection of mind, a conſtant and anxious attention to the ſlighteſt feelings, an imaginary aggravation of theſe, and an apprehenſion of danger from them.

In the ſame atonic gout, the viſcera of the thorax alſo are ſometimes affected, and palpitations, faintings, and aſthma, occur.

In the head alſo occur, headachs, giddineſs, apoplectic and paralytic affections.

521. When the ſeveral ſymptoms now mentioned occur in habits hav-

ing the marks of a gouty diſpoſition, this may be ſuſpected to have laid the foundation of them; and eſpecially when either, in ſuch habits, a manifeſt tendency to the inflammatory affection has formerly appeared; or when the ſymptoms mentioned are intermixed with, and are relieved by, ſome degrees of the inflammatory gout. In ſuch caſes there can be no doubt of conſidering the whole as a ſtate of the gout.

522. Another ſtate of the diſeaſe I name the *retrocedent* gout. This occurs when an inflammatory ſtate of the joints has, in the uſual manner, come on, but which, without ariſing to the ordinary degree of pain and inflammation, or, at leaſt, without theſe continuing for the uſual time, and receding gradually in the uſual manner, they ſuddenly and entirely ceaſe, while ſome internal part becomes affected.

The internal part moſt commonly affected is the ſtomach, which is then affected with anxiety, ſickneſs, vomiting, or violent pain; but ſometimes the internal part is the heart, which gives occaſion to a ſyncope; ſometimes it is the lungs which are affected with aſthma; and ſometimes it is the head, giving occaſion to apoplexy or palſy. In all theſe caſes, there can be no doubt of the ſymptoms being all a part of ſame diſeaſe, however different the affection may ſeem to be in the parts which it attacks.

523. The third ſtate of irregular gout, which we name the *miſplaced*, is when the gouty diatheſis, inſtead of producing the inflammatory affection of the joints, produces an inflammatory affection of ſome internal part, and which appears from the ſame ſymptoms that

attend the inflammation of thoſe parts ariſing from other cauſes.

Whether the gouty diatheſis does ever produce ſuch inflammation of the internal parts, without having firſt produced it in the joints, or if the inflammation of the internal parts be always a tranſlation from the joints previouſly affected, I dare not determine; but, even ſuppoſing the latter to be always the caſe, I think the difference of the affection of the internal part muſt ſtill diſtinguiſh the miſplaced from what I have named the Retrocedent Gout.

524. What internal parts may be affected by the miſplaced gout I cannot preciſely ſay, becauſe I have never met with any caſes of the miſplaced gout in my practice; and I find no caſes of it diſtinctly marked by practical

writers, except that of pneumonic inflammation.

525. There are two cauſes of a tranſlated gout; the one of which is an affection of the neck of the bladder, producing pain, ſtranguary, and a catarrhus veſicæ: The other is an affection of the rectum, ſometimes by pain alone in that part, and ſometimes by hæmorrhoidal ſwellings there. In gouty perſons, I have known ſuch affections alternate with inflammatory affections of the joints: But whether to refer theſe affections to the retrocedent or to the miſplaced gout, I will not preſume to determine.

526. From the hiſtory which I have now delivered of the gout, I think it may be diſcerned under all its various appearances. It is, however, commonly ſuppoſed, that there are caſes

in which it may be difficult to diſtinguiſh gout from rheumatiſm, and it is poſſible there may be ſuch caſes: but, for the moſt part, the two diſeaſes may be diſtinguiſhed with more certainty by obſerving the prediſpoſition, the antecedents, the parts affected, the recurrences of the diſeaſe, and its connection with the other parts of the ſyſtem; which circumſtances, for the moſt part, appear very differently in the two diſeaſes.

527. With reſpect to the gout, our next buſineſs is to inveſtigate its proximate cauſe; which muſt be a difficult taſk, and I attempt it with ſome diffidence.

528. Upon the ſubject, the opinion which has generally prevailed is, that the gout depends upon a certain morbific matter, always preſent in the body;

and that this matter, by certain cauſes, thrown upon the joints or other parts, produces the ſeveral phenomena of the diſeaſe.

529. This doctrine, however antient and general, appears to me very doubtful; for,

Firſt, there is no direct evidence of any morbific matter being preſent in perſons diſpoſed to the gout. There are no experiments or obſervations which ſhew that the blood, or other humours of gouty perſons, are in any reſpect different from thoſe of other perſons. Previous to attacks of the gout, there appear no marks of any morbid ſtate of the fluids; for the diſeaſe generally attacks thoſe perſons who have enjoyed the moſt perfect health, and appear to be in that ſtate when the diſeaſe comes on. At a certain period of the diſeaſe, a peculiar matter indeed appears in gouty perſons, (516.); but this, which does not appear in every inſtance, and which appears only after the diſeaſe has ſubſiſted for a long time, ſeems manifeſtly to be the effect, not the cauſe of the diſeaſe. Further, though there be certain acrids which, taken into the body, ſeem to excite the gout (504.) it is probable that theſe acrids operate otherwiſe in exciting the diſeaſe, than by affording the material cauſe of it. In general, therefore, there is no proof of any morbific matter being the cauſe of the gout.

Secondly, the ſuppoſitions concerning the particular nature of the matter producing the gout, have been ſo various and ſo contradictory to each other, as to allow us to conclude, that there is truely no proof of the exiſtence of any of them. With the reſpect to many of theſe ſuppoſitions, they are ſo inconſiſtent with chemical philoſophy, and with the laws of the animal œconomy, that they muſt be entirely rejected.

Thirdly, The ſuppoſition of a morbific matter being the cauſe of the gout, is not conſiſtent with the phenomena of the diſeaſe, particularly with its frequent and ſudden tranſlations from one part to another.

Fourthly, The ſuppoſition is farther rendered improbable by this, that, if a morbific matter did exiſt, its operation ſhould be ſimiliar in the ſeveral parts which it attacks; whereas it ſeems to be very different, being ſtimulant and exciting inflammation in the joints, but ſedative and deſtroying the tone in the ſtomach: Which, upon the ſuppoſition of particular matter acting in both caſes, is not to be explained by any difference in the part affected.

Fifthly, Some facts, alleged in proof of a morbific matter, are not ſufficiently confirmed, ſuch as thoſe which would prove the diſeaſe to be contagious. There is, however, no proper evidence of this, the facts given being not only few, but exceptionable; and the negative obſervations are innumerable.

Sixthly, Some arguments brought in favour of a morbific matter, are founded upon a miſtaken explanation. The diſeaſe has been ſuppoſed to depend upon a morbific matter, becauſe it is hereditary. But the inference is not juſt: for moſt hereditary diſeaſes do not depend upon any morbific matter, but upon a particular conformation of the ſtructure of the body, tranſmitted from the parent to the offspring; and this laſt appears to be particularly the caſe in the gout. It may be alſo obſerved, that hereditary diſeaſes, depending upon a morbific matter, always appear much more early in life than the gout commonly does.

Seventhly, The ſuppoſition of a morbific matter being the cauſe of the gout, has been hitherto uſeleſs, as it has not ſuggeſted any ſucceſsful method of cure. Particular ſuppoſitions have often corrupted the practice, and have frequently led from thoſe views which might be uſeful, and from that practice which experience had approved. Further, though the ſuppoſition of a morbific matter has been generally received, it has been as generally neglected in practice. When the gout has affected the ſtomach, nobody thinks of correcting the matter ſuppoſed to be preſent there, but merely of reſtoring the tone of the moving fibres.

Eighthly, The ſuppoſition of a morbific matter is quite ſuperfluous: for it explains nothing, without ſuppoſing that matter to produce a change in the ſtate of the moving powers; and a change in the ſtate of the moving powers, produced by other cauſes, explains every circumſtance, without the ſuppoſition of a morbific matter: and, to this purpoſe, it may be obſerved, that many of the cauſes (504.) exciting the gout, do not operate upon the ſtate of the fluids, but directly and ſolely upon that of the moving powers.

Laſtly, The ſuppoſition of a morbific matter is alſo ſuperfluous; becauſe, without any ſuch ſuppoſition, I think the diſeaſe can be explained in a manner more conſiſtent with its phenomena, with the laws of the animal œconomy, and with the method of cure which experience has approved.

I now proceed to give this explanation; but before entering upon it, I muſt premiſe ſome general obſervations.

530. The firſt obſervation is, that the gout is a diſeaſe of the whole ſyſtem,

or depends upon a certain general conformation and ſtate of the body; which manifeſtly appears from the facts mentioned from 494. to 497. But the general ſtate of the ſyſtem depends chiefly upon the ſtate of its primary moving powers; and therefore the gout may be ſuppoſed to be chiefly an affection of theſe.

531. My ſecond obſervation is, that the gout is manifeſtly an affection of the nervous ſyſtem*; in which the primary moving powers of the whole ſyſtem are lodged. The occaſional or exciting cauſes (504.) are almoſt all ſuch

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* Boerhaave, after deſcribing the diſeaſe, ſays, Aphoriſm, 1262. "From all which it appears that "the proximate cauſe of the gout is a vitiated ſtate "of the moſt minute, and conſequently nervous "veſſels of the body; and alſo of that fluid which "flows through the nerves."

as act directly upon the nerves and nervous ſyſtem; and the greater part of the ſymptoms of the atonic or retrocedent gout are manifeſtly affections of the ſame ſyſtem. (520. and 522.) This leads us to ſeek for an explanation of the whole of the diſeaſe in the laws of the nervous ſyſtem, and particularly in the changes which may happen in the balance of its ſeveral parts.

532. My third obſervation is, that the ſtomach, which has ſo univerſal a conſent with the reſt of the ſyſtem, is the internal part that is the moſt frequently, and often very conſiderably, affected by the gout. The paroxyſms of the diſeaſe are commonly preceded by an affection of the ſtomach (507.); many of the exciting cauſes (504.) act firſt upon the ſtomach; and the ſymptoms of the atonic and retrocedent gout (520. 522.) are moſt commonly and chiefly

affections of the ſame organ. This obſervation leads us to remark, that there is a balance ſubſiſting between the ſtate of the internal and that of the external parts; and, in particular, that the ſtate of the ſtomach is connected with that of the external parts, (44.) ſo that the ſtate of tone in the one may be communicated to the other.

533. Theſe obſervations being premiſſed, I ſhall now offer the following pathology of the gout.

In ſome perſons there is a certain vigorous and plethoric ſtate of the ſyſtem (496.) which, at a certain period of life, is liable to a loſs of tone in the extremities (499. 506.) This is in ſome meaſure communicated to the whole ſyſtem, but appears more eſpecially in the functions of the ſtomach (507) When this loſs of tone occurs while the energy of the brain ſtill retains its vigour, the vis medicatrix naturæ is excited to reſtore the tone of the parts; and accompliſhes it by exciting an inflammatory affection in ſome part of the extremities. When this has ſubſiſted for ſome days, the tone of the extremities and of the whole ſyſtem, are reſtored, and the patient returns to his ordinary ſtate of health (511.)

534. This is the courſe of things, in the ordinary form of the diſeaſe which we name the *regular gout;* but there are circumſtances of the body, in which this courſe is interrupted or varied. Thus when the atony (506. 507) has taken place, if the re-action (509.) do not ſucceed, the atony continues in the ſtomach, or perhaps in other internal parts, and produces that ſtate which we have, for reaſons now obvious, named the *atonic gout.*

535. A ſecond caſe of variation in the courſe of the gout is, when, to the atony, the re-action and inflammation have to a certain degree ſucceeded, but, from cauſes either internal or external, the tone of the extremities, and perhaps of the whole ſyſtem, is weakened; ſo that the inflammatory ſtate, before it had either proceeded to the degree, or continued for the time, requiſite for reſtoring the tone of the ſyſtem, ſuddenly and entirely ceaſes. Hence the ſtomach, and other internal parts, relapſe into the ſtate of atony; and perhaps have this increaſed by the atony communicated from the extremities: All which appear in what we have termed the *retrocedent* gout.

536. A third caſe of variation from the ordinary courſe of the gout, is, when, to the atony uſually preceding, an inflammatory re-action fully ſucceeds; but

has its uſual determination to the joints by ſome circumſtances prevented; and is therefore directed to an internal part, where it produces an inflammatory affection, and that ſtate of things which we have named the *miſplaced gout.*

537. We have thus offered an explanation of the circumſtances of the ſyſtem in the ſeveral ſtates of the gout; and this explanation we ſuppoſe to be conſiſtent with the phenomena of the diſeaſe, and with the laws of the animal œconomy. There are indeed, with reſpect to the theory of the diſeaſe, ſeveral queſtions which might be put; to which we have not given any anſwer. But, tho' perhaps we could give an anſwer to many of theſe queſtions, it does not here appear neceſſary; as at preſent we intend only to eſtabliſh ſuch general facts with regard to this diſeaſe, as may lay a foundation for the cure

of it, ſo far as experience has enabled us to proſecute it. Proceeding, therefore, upon the ſeveral parts of the pathology given, as ſo many matters of fact, I ſhall now conſider what may be attempted towards the cure of the diſeaſe.

538. In entering upon this, I muſt obſerve, in the firſt place, that a cure has been commonly thought impoſſible; and we acknowledge it to be very probable, that the gout, as a diſeaſe of the whole habit, and very often depending upon original conformation, cannot be cured by medicines, the effects of which are always very tranſitory, and ſeldom extend to the producing any conſiderable change of the whole habit.

539. It would perhaps have been happy for gouty perſons, if this opinion had

been implicitly received by them: as it would have prevented their having been ſo often the dupes of ſelf-intereſted pretenders, who have either amuſed them with inert medicines, or have raſhly employed thoſe of the moſt pernicious tendency. I am much diſpoſed to believe the impoſſibility of a cure of the gout by medicines; and more certainly ſtill incline to think, that whatever may be the poſſible power of medicines, yet no medicine for curing the gout has hitherto been found. Altho' almoſt every age has preſented a new remedy, yet all hitherto offered have very ſoon been either neglected as uſeleſs, or condemned as pernicious.

540. Though unwilling to admit the power of medicines, yet I contend, that a great deal can be done towards the cure of the gout by a regimen: And from what has been obſerved (498), I am firmly perſuaded, that any man

who, early in life, will enter upon the conſtant practice of bodily labour, and of abſtinence from animal food, will be preſerved entirely from the diſeaſe.

Whether there be any other means of radically curing the gout, I am not ready to determine. There are hiſtories of caſes of the gout, in which it is ſaid, that by great emotions of mind, by wounds, and by other accidents, the ſymptoms have been ſuddenly relieved, and never again returned; but how far theſe accidental cures might be imitated by art, or would ſucceed in other caſes, is at leaſt extremely uncertain.

541. The practices proper and neceſſary in the treatment of the gout, are to be conſidered under two heads: *firſt*, As they are to be employed in the in-

tervals of paroxyſms; or, *ſecondly*, As during the time of theſe.

542. In the intervals of paroxyſms, the indications are, to prevent the return of paroxyſms, or at leaſt to render them leſs frequent, and more moderate. During the time of paroxyſms, the indications are, to moderate their violence, and ſhorten the duration of them as much as can be done with ſafety to the patient.

543. It has been already obſerved, that the gout may be entirely prevented by conſtant bodily exerciſe, and by a low diet; and I am of opinion, that this prevention may take place even in perſons who have a hereditary diſpoſition to the diſeaſe. I muſt add here, that, even when the diſpoſition has diſcovered itſelf by ſeveral paroxyſms of inflammatory gout, I am

perſuaded that labour and abſtinence will abſolutely prevent any returns of it for the reſt of life *. Theſe, therefore, are the means of anſwering the firſt indication to be purſued in the intervals of paroxyſms ; and I muſt here offer ſome remarks upon the proper uſe of theſe remedies.

544. Exerciſe in perſons diſpoſed to the gout is directed to two purpoſes : One

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* Several caſes are to be met with in practical authors, which confirm this obſervation. Van Swieten relates the caſe of a prieſt, who enjoyed a rich living, and had long been an old conſtant ſufferer in the gout ; but happening at laſt to be taken by the pirates of Barbary, was detained there in a ſtate of ſlavery for the ſpace of two years, and kept conſtantly at work in the galleys, with only a very ſpare diet. The regimen he there underwent had this good effect, that after he was ranſomed from his captivity, having loſt his troubleſome and monſtrous fatneſs, he never once had a fit of the gout, though he lived ſeveral years after the event happened.

One of theſe is the ſtrengthening of the tone of the extreme veſſels; and the other, the guarding againſt a plethoric ſtate. For the former if exerciſe be employed early in life, and before intemperance has weakened the body, a very moderate degree of it will anſwer the purpoſe; and for the latter, if abſtinence be at the ſame time obſerved, little exerciſe will be neceſſary.

545. With reſpect to exerciſe, this in general is to be obſerved, that it ſhould never be violent; for, if violent, it cannot be long continued, and muſt always endanger the bringing on an atony in proportion to the violence of the preceding exerciſe.

546. It is alſo to be obſerved, that the exerciſe of geſtation, though conſiderable and conſtant, if it be entirely

ly without bodily exerciſe, will not anſwer the purpoſe in preventing the gout. For this end, therefore, the exerciſe muſt be in ſome meaſure that of the body; and muſt be moderate, but at the ſame time conſtant, and continued through life.

547. In every caſe and circumſtance of the gout in which the patient retains the uſe of his limbs, bodily exerciſe, in the intervals of paroxyſms, will always be uſeful; and, in the beginning of the diſeaſe, when the diſpoſition to it is not yet ſtrong, exerciſe may prevent a paroxyſm which otherwiſe might have come on. In more advanced ſtates of the diſeaſe, howeever, when there is ſome diſpoſition to a paroxyſm, much walking will bring it on; either as it weakens the tone of the lower extremities, or as it excites an inflammatory diſpoſition in

them; and it is probable, that in the ſame manner ſtrains or contuſions often bring on a paroxyſm of the gout.

548. Abſtinence, the other part of our regimen (540.) for preventing the gout, is of more difficult application. If an abſtinence from animal food be entered upon early in life, while the vigour of the ſyſtem is yet entire, we have no doubt of its being both ſafe and effectual; but, if the motive for this diet ſhall not have occurred till the conſtitution ſhall have been broken by intemperance, or by the decline of life, a low diet may then endanger the bringing on an atonic ſtate.

549. Further, if a low diet be entered upon only in the decline of life, and be at the ſame time a very great change in the former manner of living,

ing, the withdrawing of an accuſtomed ſtimulus of the ſyſtem may readily throw this into an atonic ſtate *.

550. The ſafety of an abſtemious courſe may be greater or leſs according to the management of it. It is animal food which eſpecially diſpoſes to the plethoric and inflammatory ſtate, and that food is to be therefore eſpecially avoided; but, on the other hand, it is vegetable aliment of the loweſt quality that is in danger of weakening the ſyſtem too much, by not affording ſufficient nouriſhment; and more particularly, of weakening the tone of the ſtomach by its aceſcency. It is therefore a diet of a middle nature

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* A ſudden change from a full to a ſpare diet was juſtly enumerated among the occaſional cauſes of the gout in article, 504.

ture that is to be choſen; and milk is preciſely of this kind, as containing both animal and vegetable matter.

As approaching to the nature of milk, and as being a vegetable matter containing the greateſt portion of nouriſhment, the farinaceous ſeeds are next to be choſen, and are the food moſt proper to be joined with milk.

551. With reſpect to drink, fermented liquors are uſeful only when they are joined with animal food, and that by their aceſcency; and their ſtimulus is only neceſſary from cuſtom. When, therefore, animal food is to be avoided, fermented liquors are unneceſſary; and, by increaſing the aceſcency of vegetables, theſe liquors may be hurtful. The ſtimulus of fermented or ſpirituous liquors, is not neceſſary to the young and vigorous; and,

when much employed, impairs the tone of the ſyſtem. Theſe liquors, therefore, are to be avoided, except ſo far as cuſtom and the declining ſtate of the ſyſtem may have rendered them neceſſary. For preventing or moderating the regular gout, water is the only proper drink.

552. With reſpect to an abſtemious courſe, it has been ſuppoſed that an abſtinence from animal food and fermented liquors, or the living upon milk and farinacea alone for the ſpace of one year, might be ſufficient for a radical cure of the gout: and it is poſſible that, at a certain period of life, in certain circumſtances of the conſtitution, ſuch a meaſure might anſwer the purpoſe. But this is very doubtful; and it is more probable that the abſtinence muſt, in a great meaſure, be continued, and the milk diet be perſiſted

in, for the reſt of life. It is well known, that ſeveral perſons who had entered on an abſtemious courſe, and had been thereby delivered from the gout, have, however, upon returning to their former manner of full living, had the diſeaſe return upon them with as much violence as before, or in a more irregular and more dangerous form.

553. It has been alleged, that, for preventing the return of the gout, blood-letting, or ſcarifications the feet frequently repeated, and at ſtated times, may be practiſed with advantage; but of this I have had no experience.

554. Exerciſe and abſtinence are the means of avoiding the plethoric ſtate which gives diſpoſition to the gout; and are therefore the means propoſed for preventing paroxyſms, or at

leaſt for rendering them leſs frequent and more moderate. But many circumſtances prevent the ſteadineſs neceſſary in purſuing theſe meaſures: and therefore, in ſuch caſes, unleſs great care be taken to avoid the exciting cauſes, the diſeaſe may frequently return; and, in many caſes, the preventing of paroxyſms is chiefly to be obtained by avoiding thoſe exciting cauſes enumerated in 504. The conduct neceſſary for avoiding them, will be ſufficiently obvious to perſons acquainted with the doctrines of the Hygieine, which I ſuppoſe to have been delivered in another place.

555. A due attention in avoiding thoſe ſeveral cauſes, (503, 504,) will certainly prevent fits of the gout; and the taking care that the exciting cauſes be never applied in a great degree, will certainly render fits more moderate when

they do come on. But, upon the whole, it will appear, that a ſtrict attention to the whole conduct of life, is in this matter neceſſary * ; and therefore, when

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* The phyſician has more difficulty in perſuading his patients to a proper regimen in the gout than in any other diſeaſe; and if he would gain reputation, he ought to pay peculiar attention to this part of practice, and uſe his utmoſt art in convincing his patient of the neceſſity of an abſtemious diet, and a regular conduct.

Gouty patients are generally the genuine offspring of jolly Bacchus, and prefer the tranſient indulgence of their jovial inclinations to the ranſom of whole years of torment at the eaſy price of a life of ſobriety and temperance, until the invincible Queen of tortures, as Lucian calls her, fully convinces them of their errors. They are then anxious for medical advice, and after conſulting the phyſician, they are willing implicitly to obey his ſtricteſt injunctions. They ſeldom, however, then find much relief; and remain living proofs of the truth of the adage;

——— ſero medicina paratur,
Cum mala per longas invaluere moras.

when the prediſpoſition has taken place, it will be extremely difficult to avoid the diſeaſe.

146. I am indeed firmly perſuaded, that, by obviating the prediſpoſition, and by avoiding the exciting cauſes, the gout may be entirely prevented: But as the meaſures neceſſary for this purpoſe will, in moſt caſes, be purſued with difficulty, and even with reluctance, men have been very deſirous to find a medicine which might anſwer the purpoſe without any reſtraint on their manner of living. To gratify this deſire, phyſicians have propoſed, and, to take advantage of it, empirics have feigned, many remedies, as we have already obſerved. Of what nature ſeveral of theſe remedies have been, I cannot certainly ſay; but, of thoſe which are unknown, we conclude, from their having been only of temporary fame, and from

their having ſoon fallen into neglect, that they have been either inert or pernicious, and therefore I make no enquiry after them; and ſhall now remark only upon one or two known remedies for the gout which have been lately in vogue.

557. One of theſe is what has been named in England the Portland Powder*. This is not a new medicine, but is

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* This medicine was ſo called from one of the Dukes of Portland being cured by it of an hereditary and very inveterate gout. It conſiſts of equal parts of the following bitter aromatics: viz. Rad. ariſtolochiæ rotundæ, Rad. gentianæ, Summitat. chamedryos, Summitat. chamæpityos, Summitat. centaur. min. A dram of this powder is ordered to be taken, in any convenient vehicle, as a little wine, broth, tea, &c. in a morning, faſting, the patient taſting nothing for an hour and an half after it; it muſt be uſed in this doſe for three months without the leaſt

mentioned by GALEN, and, with ſome little variation in its compoſition, has been mentioned by the writers of almoſt every age ſince that time. It appears to

leaſt interruption: Forty five grains are to be taken daily in the ſame manner, for the ſucceeding three months: half a dram every day, for the next ſix months; and half a dram every other day, during the ſecond year. It is ſometimes two years complete before any change be produced, but the patient muſt not therefore abandon the medicine, but continue its uſe

Theſe aromatic bitters have been long in uſe as remedies for the gout. We find Galen preſcribing in this diſeaſe the ſeeds and tops of wild rue, birth-wort, leſſer centuary, gentian, &c. either ſingly, or mixed in certain proportions. Trallian deſcribes ſimilar antidotes, which he ſays, muſt be continued for a great length of time, viz. ſix or ſeven months, or even for a year and upwards. The tetra-pharmacon of Aetius, compoſed of gentian, birthwort, bay-berries, and myrrh, is a ſimilar remedy, and is alſo directed to be uſed for a great length of time. Cælius Aurelianus likewiſe mentions the bitters to be long uſed in the gout, and he gives them the appoſite epithet of *annalia*. The Diateſſeron, which has not been long thrown to have been at times in faſhion, and to have again fallen into neglect; and I think that this laſt has been owing to its having been found to be, in many

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thrown out of our ſhops, and is ſtill retained in ſome of the foreign pharmacopœias, is of the ſame kind.

The uſe of theſe medicines has doubtleſs in many caſes completely cured the gout; but in many caſes, even in thoſe that have been cured, fatal diſeaſes have ſupervened. The antients were well aware of the danger of an indiſcriminate uſe of theſe medicines: "Many," ſays Galen, "of "a moderate and ſlender habit of body, have loſt their "life by the uſe of drinks compoſed of theſe kinds of re-"medies, their blood being dried up. The numerous "arthritic caſes cured by theſe medicines, encouraged "gouty people to have recourſe to them indiſcriminately, "and without reflecting that thoſe, who had been cured "by them, were of a humid and phlegmatic habit, to "whom medicines of this ſort might be adminiſtered "with ſafety." Ægineta has a ſimilar paſſage. "Thoſe," ſays he, "who endeavour to remove the diſeaſe entirely "by medicines, to be uſed through the whole year, will "doubtleſs do ſervice to ſuch patients as are infeſted with "pituitous and excrementitious humours in their joints, "but ny inſtances, pernicious. In every inſtance which I have known of its exhibition for the length of time preſcribed, the perſons who had taken it were indeed afterwards free from any inflammatory affection of the joints: but they were affected with many ſymptoms of the atonic gout; and all, ſoon after finiſhing their courſe of the medicine, have been attacked with apoplexy, aſthma, or dropſy, which proved fatal.

558. Another

“ but they will haſten an untimely death in perſons of a
“ dry and hot habit of body, by forcibly driving the mor-
“ bific matter on the inteſtines, kidneys, lungs, or ſome
“ other of the principal bowels.”

The antients, then, were aware of the danger attending the promiſcuous uſe of theſe remedies; and the moderns are ſtill more convinced of that danger: hence theſe aromatic bitters are entirely laid aſide, and in their place the Peruvian bark is the only tonic now uſed in theſe caſes.

558. Another remedy which has had the appearance of preventing the gout, is an alkali in various forms, ſuch as the fixed alkali both mild and cauſtic, lime-water, ſoap, and abſorbent earths. Since it became common to exhibit theſe medicines in nephritic and calculous caſes, it has often happened that they were given to thoſe who were at the ſame time ſubject to the gout; and it has been obſerved, under the uſe of theſe medicines, gouty perſons have been longer free from the fits of their diſeaſe*. That, however, the uſe of theſe

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* Some remarkable caſes have lately occurred in this city of the efficacy of aerated alkaline water, in preventing the returns of the paroxyſms of the gout. It requires to be taken for a great length of time, to inſure ſucceſs; but the patient is encouraged to perſevere in its uſe, in conſequence of a ſpeedy removal of ſome of the moſt troubleſome ſymptoms.

medicines has entirely prevented the returns of gout, I do not know; becauſe I never puſhed the uſe of thoſe medicines for a long time, being apprehenſive

The method of making it is deſcribed by ſeveral authors; but, for the ſake of thoſe readers who are unacquainted with the proceſs I ſhall give an abſtract of it.

Diſſolve three ounces, Troy weight, of good ſalt of Tartar in a gallon and a half of rain water, or good ſoft ſpring water; filtre the ſolution, and put as much of it it into the middle glaſs of Parker's machine as will completely fill the veſſel, reſerving the remainder for a ſubſequent making. The effervefcing materials muſt then be put into the lower veſſel, and a gentle ſtream of fixed air muſt be made to paſs through the liquor, till it taſtes evidently acidulous, which will probably require 48 or 60 hours, or in ſummer more.

The method of of managing the effervefcence is of conſiderable conſequence; for, if it is too violent at firſt, much air eſcapes through the veſſels without effect. Aſcertain, by previous experiment, how much of the vitriolic acid, which you have procured, for it is of very different ſtrengths in the ſhops, will ſaturate a dram of the chalk. Put four ounces of dry powdered chalk into the lower prehenſive that the long continued uſe of them might produce a hurtful change in the ſtate of the fluids.

559. With

lower veſſel, and ſhake it to one ſide; under that ſide put a wedge, ſo as to raiſe it about an inch and an half from the table. With a long funnel, which reaches to the bottom of the veſſel, pour in the quantity of vitriolic acid neceſſary for the ſaturation, which will run down to the other ſide of the veſſel, and not come into contact with the chalk: through the ſame funnel, pour very ſlowly as much water as will be ſufficient to cover about a fourth part of the chalk as it then lies. The veſſel being gently ſhaken occaſionally, the efferveſcence will go on very ſlowly, and the alkaline liquor will be ſooner and more effectually ſaturated, than if the efferveſcence had been too violent. If the materials are not ſufficient for giving an acidulous taſte to the liquor, the lower veſſel muſt be waſhed, and freſh chalk and acid again put into it.

The doſe of this water is half a pint about noon, and another in the evening. In urgent caſes half a pint has been given morning, noon, and night, for a conſiderable time together, without diſagreeing with the ſtomach, or injuring the appetite or general health of the patient. If it

559. With reſpect to preventing the gout, I have only one other remark to offer. As the preventing the gout depends very much on ſupporting the tone of the ſtomach, and avoiding indigeſtion; ſo coſtiveneſs, by occaſioning this, is very hurtful to gouty perſons. It is therefore neceſſary for ſuch perſons to prevent or remove coſtiveneſs, and, by a laxative medicine, when needful; but it is at the ſame time proper, that the medicine employed ſhould be ſuch as may keep the belly regular, without much purging. Aloetics, rhubarb, magneſia alba, or flowers of ſulphur, may be employed, as the one or

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it proves flatulent, a tea-ſpoonful or two, but not more, of ſpirituous cinnamon water may be taken in each doſe. If it inflames, or too violently irritates the urinary paſſages, five or ten, or in urgent caſes, twenty drops of laudanum may be taken with each doſe of the water.

or the other may happen to be beſt ſuited to particular perſons *.

560. Theſe

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* The following formula may be uſed in particular caſes:

R. Aloes Socotorin. ʒ ii.
Gum. Guaiac. ʒ iii.
Tinct. Sacræ, q. s.
M. f. maſſa, in pilulas equales xv. dividenda; quarum ſumat iii. vel iv. pro re nata.

R. Pulv. Rad. Rhei, ʒ iii.
Magneſ. alb. ℥ ß
Gum. Guaiac. ʒ ii.
Confect. Aromat. ʒ ii.
Syrup. comm. q. s.
M. f. Elect. cujus ſumat magnitudinem juglandis mane et veſpere, vel pro re nata.

This laſt medicine has been extremely beneficial in removing coſtiveneſs, and in giving a tone to the ſtomach.

An

560. Theſe are the ſeveral meaſures (from 542. to 559.) to be purſued in the intervals of the paroxyſms; and we are next to mention the meaſures proper during the time of them.

561. As

An ounce, or an ounce and a half, or two ounces of the tinctura ſacra, is alſo a good purge for gouty perſons.

The Elixir Sennæ is likewiſe a good medicine where we cannot uſe aloetic purges, as in caſes of piles: in theſe caſes alſo we may uſe ſulphur; of which the following form is very convenient:

R. Flor. Sulphuris, ℥ ii.
Elect. Lenitivi, ℥ ii.
Pulv. Rad. Jalap. ʒ ii.
Zinzib. ʒ ii.
Syr. Simpl. q. s.
M. f. Elect. cujus ſumat quantitatem juglandis pro re nata.

561. As during the times of paroxyſms the body is in a feveriſh ſtate, no irritation ſhould then be added to it; and every part, therefore, of the antiphlogiſtic regimen, (130, to 133) except the application of cold, ought to be ſtrictly obſerved.

Another exception to the general rule may occur when the tone of the ſtomach is weak, and when the patient has been before much accuſtomed to the uſe of ſtrong drink; for then it may be allowed, and even neceſſary, to give ſome animal food, and a little wine.*

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* The wine in theſe caſes ſhould be of the beſt kind, and ſuch as are not apt to turn ſour on the ſtomach. The dry wines, as Sherry and Madiera, are moſt proper, while both the rich ſweet wines and the auſtere thin acid wines are equally improper.

562. That no irritation is to be added to the ſyſtem during the paroxyſms of gout, except in the caſes mentioned, is entirely agreed upon among phyſicians: But it is a more difficult matter to determine whether, during the time of paroxyſms, any meaſures may be purſued to moderate the violence of reaction and of inflammation. Dr Sydenham has given it as his opinion, that the more violent the inflammation and pain, the paroxyſms will be ſhorter, as well as the interval between the preſent and next paroxyſm longer: and, if this opinion be admitted as juſt, it will forbid the uſe of any remedies which might moderate the inflammation; which is, to a certain degree, undoubtedly neceſſary for the health of the body. On the other hand, acute pain preſſes for relief, and, although a certain degree of inflammation may ſeem abſolutely neceſſary, it is not cer-

tain but that a moderate degree of it may anſwer the purpoſe: And it is even probable, that, in many caſes the violence of inflammation may weaken the tone of the parts, and thereby invite a return of paroxyſms. It ſeems to me to be in this way, that, as the diſeaſe advances, the paroxyſms become more frequent.

563. From theſe laſt conſiderations, it ſeems probable, that, during the time of paroxyſms, ſome meaſures, may be taken to moderate the violence of the inflammation and pain; and particularly, that, in firſt paroxyſms, and in the young and vigorous, blood-letting at the arm may be practiſed with advantage: But I am perſuaded, that this practice cannot be repeated often with ſafety; becauſe blood-letting not only weakens the tone of the ſyſtem, but may alſo contribute to produce plethora. I believe, however, that

bleeding by leeches on the foot, and upon the inflamed part, may be practiſed and repeated with greater ſafety; I have known inſtances of its having been practiſed with ſafety, to moderate and ſhorten paroxyſms: but how far it may be carried, we have not had experience enough to determine.

564. Beſides blood-letting, and the antiphlogiſtic regimen, it has been propoſed to employ remedies for moderating the inflammatory ſpaſm of the part affected, ſuch as warm bathing, and emollient poultices. Theſe have ſometimes been employed with advantage and ſafety; but, at other times, have been found to give occaſion to a retroceſſion of the gout*.

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* On this account theſe topical remedies ought to be uſed with great caution: the temporary relief which they afford

565. Bliſtering is a very effectual means of relieving and diſcuſſing a paroxyſm of the gout; but has alſo frequently had the the effect of rendering it retrocedent*.

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afford, by procuring an intermiſſion of the pain, is agreeable to the patient, but it is frequently the occaſion of an exacerbation of all the ſymptoms.

* This is a very dangerous practice. Bliſters are however extremely uſeful, in bringing back the retrocedent gout to the part originally affected; but, the violent degree of pain that accompanies the gout, when brought to a part already irritated by the bliſters, frequently prevents a patient who has once ſuffered it, from allowing it a ſecond time. It is however, ſo important and neceſſary a practice, that it ought not to be omitted. As ſoon as the gout has been brought back to its original place, the bliſters muſt be immediately removed, a piece of ſoft linen dipped in freſh oil, applied to the part, and the whole well wrapt up in ſoft flannel; a moderate degree of heat muſt be preſerved in the flannel, and the patient muſt be encouraged to bear with patience, the violent pain which he ſuffers.

566. The ſtinging with nettles I conſider as analogous to bliſtering; and I think it probable that it would be attended with the ſame danger.

567. The burning with moxa*, or other ſubſtances, I conſider as a remedy

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* Moxa, is a ſoft lanuginous ſubſtance prepared in Japan, from the young leaves of a ſpecies of Artemiſia, by beating them when thoroughly dried, and rubbing them between the fingers till nothing but the fineſt fibres remain.

A little cone of this cottony ſubſtance is laid upon the ſkin, which is previouſly moiſtened to prevent the cone from ſliding off: Fire is ſet to the apex of the cone, and it is ſuffered to burn till it extinguiſhes itſelf. A ſmall Eſchar is produced and the ulcer either healed or kept open as occaſion requires.

Cotton impregnated with a ſmall quantity of a ſolution of nitre, and afterwards dried, anſwers the end as effectually as the Japoneſe moxa.

of the ſame kind. I have had indeed no evidence of this proving hurtful; but neither have I had any proper evidence of its having proved a radical cure.

568. Camphire, and ſome aromatic oils, have the power of allaying the pain, and of removing the inflammation from the part affected: but theſe remedies commonly make the inflammation only ſhift from one part to another, and therefore with the hazard of its falling upon a part where it may be more dangerous; and they have ſometimes rendered the gout retrocedent.

569. From theſe reflections (564. et ſeq.) it will appear, that ſome danger muſt attend every external application to the parts affected, during a paroxyſm; and that therefore the common practice of commiting the perſon to patience

and flannel alone, is eſtabliſhed upon the beſt foundation.

570. Opiates give the moſt certain relief from pain; but, when given in the beginning of gouty paroxyſms, occaſion theſe to return with greater violence. When, however, the paroxyſms ſhall have abated in their violence, but ſtill continue to return, ſo as to occaſion painful and reſtleſs nights, opiates may be then given with ſafety and advantage, eſpecially in the caſe of perſons advanced in life, and who have been often affected with the diſeaſe*.

571. When

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* The beſt form for exhibiting opium, in theſe caſes is the Confectio Opiata of the London pharmacopæia, or the Electarium Thebaicum of the Edinburgh. The doſe of the former is half a dram, but of the latter a dram and an half.

As

571. When, after paroxyſms have ceaſed, ſome ſwelling and ſtiffneſs ſhall remain in the joints, theſe ſymptoms are to be diſcuſſed by the diligent uſe of the fleſh-bruſh.

572. Purging, immediately after a paroxyſm, will be always employed with the hazard of bringing it on again.

573. I have now finiſhed what has occurred to be ſaid upon the means of preventing and curing the regular gout; and ſhall now conſider its management when

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As opiates ought never to be adminiſtered where the inflammation is violent, but only in ſuch caſes as are attended with little or no inflammation, theſe warm opiates cannot be improper. If however the practitioner ſhould think either of the above formulæ too hot, he can have recourſe to the Tinctura Thebaica.

when it has become irregular; of which as I have obſerved above, there are three different caſes.

574. In the firſt caſe, which I have named the Atonic Gout, the cure is to be accompliſhed by carefully avoiding all debilitating cauſes; and by employing, at the ſame time, the means of ſtrengthening the ſyſtem in general, and the ſtomach in particular.

575. For the avoiding debilitating cauſes, I muſt refer to the doctrines of the Hygieine, as in 554.

576. For ſtrengthening the ſyſtem in general, I muſt recommend frequent exerciſe on horſeback, and moderate walking. Cold bathing alſo may anſwer the purpoſe, and may be ſafely employed, if it appear to be powerful in ſtimulating the ſyſtem, and be not applied

when the extremities are threatened with any pain[*].

For ſupporting the tone of the ſyſtem in general, when threatened with atonic gout, ſome animal food [†] ought to be employed, and the more aceſcent vegetables ought to be avoided. In the ſame caſe, ſome wine [‡] alſo may be neceſſary;

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[*] Cold bathing is a doubtful remedy, and ought to be uſed with caution. If it does not prove a tonic, it ought to be abandoned, and we know by experience that it frequently debilitates.

[†] The uſe of animal food is abſolutely neceſſary, and ſuch ought to be choſen as is moſt nutritive. Beef or Mutton, have been with propriety preferred to all other animal food, and ſome eminent practitioners have recommended ſtakes to every other mode of dreſſing beef and mutton. Stews, haſhes, pyes, and all high ſeaſoned diſhes, ought to be avoided.

[‡] The wine which a gouty patient uſes, ought to be generous and good, as madiera, ſherry, &c. the thin aceſcent wines as hock, claret, &c. always do miſchief.

but it ſhould be in moderate quantity, and of the leaſt aceſcent kinds; and, if every kind of wine ſhall be found to increaſe the acidity of the ſtomach, ardent ſpirits and water muſt be employed*.

577. For ſtrengthening the ſtomach, bitters and the Peruvian bark may be employed; but care muſt be taken that they be not conſtantly employed for any great length of time. Compare. *557*.

The moſt effectual medicine for ſtrengthening the ſtomach is iron, which may be employed under various preparations; but, to me, the beſt appears to be the ruſt in fine powder, which may be given in very large doſes *.

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* In order the more effectually to guard againſt aceſcency, the ſpirits and water ought, if poſſible, to be taken without ſugar, and cold. No drink is perhaps more prejudicial for gouty patients, than what is called rich punch, viz. with a large quantity of ſugar and lemon, eſpecially when taken warm.

For ſupporting the tone of the ſtomach, aromatics may be employed; but ſhould

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* The doſe muſt be very ſmall at firſt, not exceeding four or five grains in the day; the doſes may be daily increaſed two grains, till we arrive at 10 or 12, and after two or three days, 10 grains may be given twice a day. Aromatics always make it ſit eaſier on the ſtomach than it would do if taken alone; the moſt convenient form therefore is the following:

R. Rubig. Martis, gr. 10.
Confect. Card. ʒ ß
Syr. Croci, q. s.
M. f. bolus.

After the patient has taken two of theſe boluſes for three or four days, he may proceed to take three of them; and after a few more days, if the ſtomach is not diſordered, each bolus may be daily increaſed till we arrive at 24, or even 30 grains, thrice a day.

ſhould be uſed with caution, as the frequent and large uſe of them may have an oppoſite effect; and they ſhould therefore be given only in compliance with former habits, or for palliating preſent ſymptoms.

When the ſtomach happens to be liable to indigeſtion, gentle vomits may be frequently given; and proper laxatives * ſhould be always employed to obviate, or to remove, coſtiveneſs.

578. In the atonic gout, or in perſons liable to it, to guard againſt cold is eſpecially neceſſary; and the moſt certain means of doing this is, by repairing to a warm climate during the winter-ſeaſon.

559. In

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* The proper laxatives for gouty conſtitutions, are mentioned in a note on article 559.

579. In the more violent caſes of the atonic gout, bliſtering the lower extremities may be uſeful; but that remedy ſhould be avoided when any pain threatens the extremities. In perſons liable to the atonic gout, iſſues may be eſtabliſhed in the extremities, as, in ſome meaſure, a ſupplement to the diſeaſe.

580. A ſecond caſe of the irregular gout, is that which I have named the Retrocedent. When this affects the ſtomach and inteſtines, relief is to be inſtantly attempted by the free uſe of ſtrong wines, joined with aromatics, and given warm; or if theſe ſhall not prove powerful enough, ardent ſpirits muſt be employed, and are to be given in a large doſe. In moderate attacks, ardent ſpirits impregnated with garlic, or with aſa fœtida may be employed; or, even

without the ardent ſpirits, a ſolution of aſa fœtida with the volatile alkali may anſwer the purpoſe. Opiates are often an effectual remedy, and may be joined with aromatics, as in the electuarium Thebaicum * ; or they may be uſefully joined with volatile alkali and camphire †. Muſk has likewiſe proved uſeful in this diſeaſe.

When

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* The following form is extremely efficacious, and at the ſame time pleaſant to the taſte: it may be repeated three or four times, if the firſt does not procure relief.

R. Elect. Thebaic. ʒ i.
Aq. Cinnamom. ſpirituoſæ, ℥ i ß
Syr. Croci, ʒ ii.
M. f. hauſt.

† The beſt way of giving theſe medicines is in the following form:

R.

When the affection of the ſtomach is accompanied with vomiting, this may be encouraged by taking draughts of warm wine, at firſt with water, and afterwards without it; having at length recourſe, if neceſſary, to ſome of the remedies above mentioned, and particularly the opiates.

In like manner, if the inteſtines be affected with diarrhœa, this is to be at firſt encouraged, by taking plenti-

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℞. Opii purificati, gr. i.
Camphor. gr. xii.
Spt. Vini, q. s.
Confect. Cardiac. ℨ ii.
M. f. bolus.

Or the camphire may be made into a bolus with a dram of the Elect. Thebaic. and forty drops of the Spiritus Aromaticus, in a glaſs of ſtrong wine, as Madeira or Sherry, may be drank after it.

fully of weak broth; and when this ſhall have been done ſufficiently, the tumult is to be quieted by opiates.

581. When the retrocedent gout ſhall affect the lungs, and produce aſthma, this is to be cured by opiates, by antiſpaſmodics *, and, perhaps, by bliſtering on the breaſt or back.

582. When

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* The Spiritus Ethereus Vitriolicus is a medicine uſed with much ſucceſs in theſe caſes. The doſe of it is from twenty to thirty drops in a glaſs of wine. The ethereal ſpirit is ſo very volatile, that it will wholly evaporate, if it be ſuffered to ſtand in the wine for a few minutes; it muſt therefore be drank ſpeedily: and the doſe may be repeated every two hours, in caſes of emergency. In moſt caſes Laudanum will anſwer every purpoſe. Ammoniacum has been much recommended, and its powers in caſes of gouty aſthma have frequently been very conſpicuous: It may be given independently of the opiates. Two drams of it may be made into an emulſion with ſix ounces of water: and a couple of table-ſpoonfuls of this emulſion may be given every two or three hours.

582. When the gout, leaving the extremities, ſhall affect the head, and produce pain, vertigo, apoplexy, or palſy, our reſources are very precarious. The moſt probable means of relief is, bliſtering the head; and if the gout ſhall have receded very entirely from the extremities, bliſters may be applied to theſe alſo. Together with theſe bliſterings, aromatics, and the volatile alkali, may be thrown into the ſtomach*.

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* Little relief has ever been obtained in theſe caſes from internal remedies. Large doſes of the Spiritus Aromaticus have been thought ſerviceable, but the chief dependence is on the effect of bliſters on the extremities, eſpecially the feet, with warm fomentations to the legs, and rubbing the legs with a fleſh bruſh, impregnated with plenty of dry flower of muſtard.

583. The third caſe of the irregular gout is what I have named the Miſplaced, that is, when the inflammatory affection of the gout, inſtead of falling upon the extremities, falls upon ſome internal part. In this caſe, the diſeaſe is to be treated by blood-letting, and by ſuch other remedies as would be proper in an idiopathic inflammation of the ſame parts.

584. Whether the tranſlation ſo frequently made from the extremities to the kidneys, is to be conſidered as an inſtance of the miſplaced gout, ſeems, as we have ſaid before, uncertain: but I am diſpoſed to think it ſomething different; and therefore am of opinion, that, in the Nephralgia Calculoſa, produced upon this occaſion, the remedies of inflammation are to be employed no

farther than they may be otherwiſe ſometimes neceſſary in that diſeaſe, ariſing from other cauſes than the gout.

BOOK III.

OF

EXANTHEMATA,

OR

ERUPTIVE FEVERS.

585. THE diſeaſes comprehended under this title, which make the third Order of Pyrexiæ in our Noſology, are in general ſuch as do not

ariſe but upon occaſion of a ſpecific contagion applied, which firſt produces fever, and afterwards an eruption upon the ſurface of the body; and which diſeaſes, for the moſt part, affect perſons but once in the courſe of their lives.

586. Whether the Character of the Order may be thus limited, or if the Order may be allowed to comprehend alſo the eruptive fevers produced by a matter generated in the body itſelf, and likewiſe thoſe caſes of eruption which do not depend upon contagion, or upon a matter generated before the fever, but upon a matter generated in the courſe of the fever, I am not ready to determine. Of the diſeaſes enumerated by the Noſologiſts as *Exanthemata*, there are certainly three different kinds, which may be diſtinguiſhed by the circumſtances mentioned in this

and the preceding paragraph. Of the firſt kind are the Small-pox, the Chicken-pox, the Meaſles, the Scarlet Fever, and the Plague. Of the ſecond kind ſeems to be the Eryſipelas; and of the third kind I judge the Miliaria and Petechia to be. But as I am not ſufficiently confident in the facts which ſhould ſupport theſe diſtinctions, or which would enable us to apply them in all caſes; I go on in this book to treat of almoſt all the exanthemata enumerated by preceding Noſologiſts, with only ſome difference in the arrangement from what was in my former editions.

CHAP. I.

OF THE

SMALL-POX.

587. THE ſmall-pox is a diſeaſe ariſing from a contagion of a ſpecific nature, which firſt produces a fever, and, on the third or fourth day thereof, produces an eruption of ſmall red pimples. Theſe are afterwards formed into puſtules,

tules, containing a matter, which, in the courſe of eight days from the time of the eruption, is changed into pus. After this, the matter dries, and falls off in cruſts.

588. This is a general idea of the diſeaſe; but there are two particular forms or varieties of it, well known under the appellations of the *Diſtinct* and *Confluent*, which require to be ſpecially deſcribed.

589. In the former, or the diſtinct ſmall-pox, the eruptive fever is moderate, and appears to be evidently of the inflammatory kind, or what we name a Synocha. It generally comes on about mid-day, with ſome ſymptoms of a cold ſtage, and commonly with a conſiderable languor and drowſineſs. A hot ſtage is ſoon formed, and becomes more conſiderable on the

ſecond and third days. During this courſe, children are liable to frequent ſtartings from their ſlumbers; and adults, if they are kept a-bed, are diſpoſed to much ſweating. On the third day, children are ſometimes affected with one or two epileptic fits. Towards the end of the third day, the eruption commonly appears, and gradually increaſes during the fourth; appearing firſt upon the face, and ſucceſſively on the inferior parts, ſo as to be completed over the whole body on the fifth day.

From the third day, the fever abates; and againſt the fifth, it entirely ceaſes. The eruption appears firſt in ſmall red ſpots, hardly eminent, but by degrees riſing into pimples. Theſe are generally upon the face in ſmall number; but, even when more numerous, they are ſeparate and diſtinct from one another.

On the fifth or ſixth day, a ſmall veſicle, containing an almoſt colourleſs or whey-coloured fluid, appears upon the top of each pimple. For two days, theſe veſicles increaſe in breadth only, and there is a ſmall hollow pit in their middle; ſo that it is only againſt the eighth day that they are raiſed into ſpheroidical puſtules.

Theſe veſicles or puſtules, from their firſt formation, continue to be ſurrounded with an exactly circular inflamed margin, which, when the puſtules are numerous, diffuſes ſome inflammation over the neighbouring ſkin, ſo as to give ſomewhat of a damaſk roſe colour to the ſpaces between the puſtules. As the puſtules increaſe in ſize, if they be numerous on the face, againſt the eighth day the whole of the face becomes conſiderably ſwelled; and, in particular, the eye-lids are ſo much ſwelled as entirely to ſhut the eyes.

As the diſeaſe thus proceeds, the matter in the puſtules becomes by degrees more opaque and white, and at length of a yellowiſh colour. On the eleventh day, the ſwelling of the face is abated, and the puſtules ſeem quite full. On the top of each a darker ſpot appears; and at this place the puſtule, on the eleventh day, or ſoon after, is ſpontaneouſly broken, and a portion of the matter oozes out; in conſequence of which, the puſtule is ſhrivelled, and ſubſides; while the matter oozing out dries, and forms a cruſt upon its ſurface. Sometimes a little only of the matter oozes out; and what remains in the puſtule becomes thick, and even hard. After ſome days, both the cruſts and hardened puſtules fall off, leaving the ſkin which they covered of a brown red colour; and it is only after many days that the ſkin in theſe places reſumes its natural colour. In ſome caſes, where the matter of the puſtules has been more liquid, the cruſts formed by it are later in falling off, and the part they covered ſuffers ſome deſquamation, which leaves in it a ſmall pit or hollow.

This is the courſe of things on the face; and ſucceſſively, the puſtules on the reſt of the body take the ſame. The matter of the puſtules, on the arms and hands, is frequently abſorbed; ſo that, at the height of the diſeaſe, theſe puſtules appear as empty veſicles. On the tenth and eleventh days, as the ſwelling of the face ſubſides, a ſwelling ariſes in the hands and feet; but which, again, ſubſides, as the puſtules come to maturity.

When the puſtules on the face are numerous, ſome degree of pyrexia appears on the tenth and eleventh days, but diſappears again after the puſtules are fully ripened; or perhaps remains in a very ſlight degree till the puſtules on the feet have finiſhed their courſe. It is ſeldom that in the diſtinct ſmall-pox the fever continues longer.

When the puſtules on the face are numerous, ſome uneaſineſs in the throat, with a hoarſeneſs of the voice comes on upon the ſixth or ſeventh day, and a thin liquid is poured out from the mouth. Theſe ſymptoms increaſe with the ſwelling of the face; and the liquids of the mouth and throat becoming thicker, are more difficultly thrown out. There is, at the ſame time, ſome difficulty of ſwallowing; ſo that the liquids taken in to be ſwallowed are frequently rejected, or thrown out by the noſe. But all theſe affections of the fauces abate as the ſwelling of the face ſubſides*.

590. In the other form of ſmall-pox, or what is called the Confluent, the courſe of the diſeaſe is, in general, the ſame with what we have deſcribed; but the ſymptoms of every ſtage are more violent,

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* The diſcharge of Saliva is always ſalutary, and ought to be moderately encouraged. It is probably owing to the morbific matter attacking the ſalivary glands, and through them making its exit out of the body.

All the affections of the fauces, and the ſalivation, *gradually* abate as the ſwelling of the face ſubſides; but, if theſe ſymptoms diſappear *ſuddenly*, or are not ſucceded by a ſwelling of the extremities, danger is to be apprehended.

This remark is ſolely the reſult of experience, and the explanation of it ſeems to be involved in conſiderable difficulty.

violent, and ſeveral of the circumſtances are different.

In particular, the eruptive fever is more violent. The pulſe is more frequent and more contracted, approaching to that ſtate of pulſe which is found in the typhus. The coma is more conſiderable, and there is frequently a delirium. Vomiting, alſo, is a common ſymptom, eſpecially at the coming on of the diſeaſe. In very young infants, epileptic fits are ſometimes frequent on the firſt days of the diſeaſe, and ſometimes prove fatal before any eruption appears; or they uſher in a very confluent and putrid ſmall-pox.

591. The eruption appears more early on the third day, and it is frequently preceded or accompanied with an eryſipelatous efflorescence. Sometimes the eruption appears in cluſters, like that

of the meaſles. When the eruption is completed, the pimples are always more numerous upon the face, and at the ſame time ſmaller and leſs eminent. After the eruption, the fever ſuffers ſome remiſſion, but never goes off entirely; and, after the fifth or ſixth day, it again increaſes, and continues conſiderable thro' the remaining courſe of the diſeaſe.

The veſicles formed on the tops of the pimples appear ſooner; and while they increaſe in breadth, do not retain a circular, but are every way of an irregular figure. Many of them run into one another, inſomuch that very often the face is covered rather with one veſicle than with a number of puſtules. The veſicles, ſo far as they are anywiſe ſeparated, do not ariſe to a ſperoidical form, but remain flat, and ſometimes the whole of the face is of an even ſurface. When the puſtules are in any meaſure ſeparated, ed, their circumference is not bounded by an inflamed margin, and the part of the ſkin that is free from puſtules is commonly pale and flaccid.

The liquor that is in the puſtules changes from a clear to an opaque appearance, and becomes whitiſh or browniſh, but never acquires the yellow colour and thick conſiſtence that appear in the diſtinct ſmall-pox.

592. The ſwelling of the face which attends the diſtinct ſmall-pox, when they are numerous, and almoſt then only, always attends the confluent, comes on more early and ariſes to a greater degree; but abates on the tenth day, and on the eleventh ſtill more. At this time the puſtules or veſicles break, and ſhrivelling pour out a liquor that is formed into brown or black cruſts, which do not fall off for many days

after. Thoſe of the face, in falling off, leave the parts they cover ſubject to a deſquamation, which pretty certainly produces pittings.

On the other parts of the body, the puſtules of the confluent ſmall-pox are more diſtinct than upon the face, but never acquire the ſame maturity and conſiſtence of pus as in the properly diſtinct kind.

The ſalivation which only ſometimes attends the diſtinct ſmall-pox, very conſtantly attends the confluent; and both the ſalivation and the affection of the fauces above mentioned, are, eſpecially in adults, in a higher degree. In infants, a diarrhœa comes frequently in place of the ſalivation.

In the confluent ſmall-pox, there is often a conſiderable putreſcency of the fluids, as appears from petechiæ, from ſerous veſicles, under which the ſkin ſhows a diſpoſition to gangrene, and from bloody urine or other hæmorrhagy, all which ſymptoms frequently acompany this diſeaſe.

In the confluent ſmall-pox, the fever, which had only ſuffered a remiſſion from the time of eruption to that of maturation, is often, at or immediately after this period, renewed with conſiderable violence. This is what has been called the Secondary Fever; and is, in different caſes, of various duration and event.

593. We have thus endeavoured to deſcribe the various circumſtances of the ſmall-pox; and from the difference of theſe circumſtances, the event of the diſeaſe may be determined. The whole of the prognoſis may be nearly compriſed in the following propoſitions.

The more exactly the diſeaſe retains the form of the diſtinct kind, it is the ſafer; and the more completely the diſeaſe takes the form of the confluent kind, it is the more dangerous.

It is only when the diſtinct kind ſhows a great number of puſtules on the face, or otherwiſe, by fever or putreſcency, approaches to the circumſtances of the confluent, that it is attended with any danger.

In the confluent ſmall-pox there is always danger; and this is always more conſiderable and certain, according as the fever is more violent and permanent, and eſpecially as the marks and ſymptoms of putreſcency are more evident.

When the putrid diſpoſition is very great, the diſeaſe ſometimes proves fatal before the eighth day; but in moſt caſes it is on the eleventh that death happens, and ſometimes it is put off till the fourteenth or ſeventeenth day.

Though the ſmall-pox ſhould not be immediately fatal, the more violent kinds are often followed by a morbid ſtate of the body, of various kind and event. Theſe conſequences, as I judge, may be imputed ſometimes to an acrid matter produced by the preceding diſeaſe, and depoſited in different parts; and ſometimes to an inflammatory diatheſis produced, and determined to particular parts of the body.

594. It is, I think, agreed among practitioners, that, in the different caſes of ſmall-pox, the difference chiefly depends upon the appearance of diſtinct or confluent; and, from the above deſcription of theſe kinds, it will appear,

that they chiefly differ in the period of the eruption, in the number of puſtules produced, in the form of the puſtules, in the ſtate of the matter contained in them, in the continuance of the fever, and laſtly, in the danger of the diſeaſe.

595. Upon inquiring into the cauſes of theſe differences, we might readily ſuſpect, that they depended upon a difference of the contagion producing the diſeaſe. This, however, is not probable: for there are innumerable inſtances of the contagion, ariſing from a perſon labouring under the ſmall-pox of the diſtinct kind, producing the confluent; and the contrary. Since the practice of inoculation became frequent, we have known the ſame variolous matter produce in one perſon the diſtinct, and in another the confluent ſmall-pox. It is therefore highly probable, that the difference of the ſmall-pox does not de-

pend upon any difference of the contagion, but upon ſome difference in the ſtate of the perſons to whom it is applied, or in the ſtate of certain circumſtances concurring with the application of the contagion.

596. To find out wherein the difference in the ſtate of the perſons to whom the contagion of the ſmall-pox is applied conſiſts, I obſerve, that the difference between the diſtinct and confluent ſmall-pox conſiſts eſpecially in the number of puſtules produced; which, in the diſtinct, are generally few, in the confluent, always many. If, therefore, we ſhall be able to diſcover what, in the ſtate of different perſons, can give occaſion to more or fewer puſtules, we ſhall probably be able to account for all the other differences of the diſtinct and confluent ſmall-pox.

597. It is evident, that the contagion of the ſmall-pox is a ferment with reſpect to the human fluids, and aſſimilates a great part of them to its own nature*; and it is probable, that the quantity thus aſſimilated is, in proportion to the bulk of their ſeveral bodies, nearly the ſame in different perſons. This quantity paſſes again out of the body, partly by inſenſible perſpiration,

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* This opinion is moſt *probably true*, but it is by no means as the Author ſays, *evident*. His reaſoning, however, is ingenious and deſerves attention. The expulſion, or rather evacuation of the morbific matter is admitted as the cure of the diſeaſe, and the difference of the diſeaſe to the different manner in which this evacuation is made: But, the author has not proved either of the premiſes he has advanced, viz. that the quantity of human fluids which the ferment aſſimilates, is nearly the ſame in different perſons, nor that any part of the morbific matter, or the morbid aſſimilated fluids paſs off by perſpiration.

and partly by being depoſited in puſtules; but if the quantities generated be nearly equal, the quantities paſſing out of the body by the two ways mentioned are very unequal in different perſons; and, therefore, if we can explain the cauſes which determine more to paſs by the one way than by the other, we may thereby diſcover the cauſes which give occaſion to more puſtules in one perſon than in another.

598. The cauſes which determine more of the variolous matter to paſs by perſpiration, or to form puſtules, are probably certain circumſtances of the ſkin, that determine more or leſs of the variolous matter to ſtick in it, or to paſs freely through it.

599. The circumſtance of the ſkin, which ſeems to determine the variolous matter to ſtick in it, is a certain ſtate of

inflammation, depending much upon the heat of it. Thus we have many inſtances of parts of the body, from being more heated, having a greater number of puſtules than other parts. In the preſent practice of inoculation, in which few puſtules are produced, much ſeems to be owing to the care that is taken to keep the ſkin cool. Parts covered with plaſters, eſpecially with thoſe of a ſtimulant kind, have more puſtules than other parts. Further, certain circumſtances, ſuch as adult age, and full living, determining to a phlogiſtic diatheſis, ſeem to produce a greater number of puſtules; while the contrary circumſtances have contrary effects.

600. It is therefore probable, that an inflammatory ſtate of the whole ſyſtem, and more particularly of the ſkin, gives occaſion to a greater number of puſtules: and the cauſes of this may likewiſe pro-

duce moſt of the other circumſtances of the confluent ſmall-pox; ſuch as the period of eruption; the continuance of the fever; the effuſion of a more putreſcent matter, and leſs fit to be converted into pus; and, what ariſes from thence, the form and other circumſtances of the puſtules.

601. Having thus attempted to account for the chief difference which occurs in the ſtate of the ſmall-pox, we ſhall now try the truth of our doctrine, by its application to practice.

602. In conſidering the practice, we view it firſt, in general, as ſuited to render the diſeaſe more generally benign and ſafe, and this by the practice of inoculation.

603. It is not neceſſary here to deſcribe the operation of inoculating; and

what we name the practice of inoculation, comprehends all the ſeveral meaſures which precede or follow that operation, and are ſuppoſed to produce its ſalutary effects.

Theſe meaſures are chiefly the following.

1. The chooſing for the ſubject of inoculation perſons otherwiſe free from diſeaſe, and not liable, from their age or other circumſtances to any incidental diſeaſe.

2. The chooſing a perſon at the time of life moſt favourable to a mild diſeaſe.

3. The chooſing for the practice a ſeaſon the moſt conducive to the mildneſs of the diſeaſe.

4. The preparing the perſon to be inoculated, by abſtinence from animal food for ſome time before inoculation.

5. The preparing the perſon by courſes of mercurial and antimonial medicines*.

6. The taking care, at the time of inoculation, to avoid cold, intemperance, fear, or other circumſtances which might aggravate the future diſeaſe.

7. After theſe preparations and precautions, the chooſing a fit matter to be employed in inoculation, by taking it from a perſon of a ſound conſtitution, and free from any diſeaſe or ſuſpicion

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* Compare this paragraph with what follows in article, 609.

of it; by taking it from a perſon who has had the ſmall-pox of the moſt benign kind; and, laſtly, by taking the matter from ſuch perſons, as ſoon as it has appeared in the puſtules, either in the part inoculated, or on other parts of the body.

8. The introducing, by inoculation, but a ſmall portion of the contagious matter.

9. After inoculation, the continuing the vegetable diet, as well as the employment of mercurial and antimonial medicines; and, at the ſame time, frequently employing purgatives.

10. Both before and after inoculation, taking care to avoid external heat, either from the ſun, artificial fires, warm chambers, much cloathing, or being much in bed; and, on the contrary,

expoſing the perſon to a free and cool air.

11. Upon the appearance of the eruptive fever, the rendering that moderate by the employment of purgatives; by the uſe of cooling and antiſeptic acids; and eſpecially, by expoſing the perſon frequently to a cool and even a cold air, at the ſame time giving freely of cold drink.

12. After the eruption, the continuing the application of cold air, and the uſe of purgatives, during the courſe of the diſeaſe, till the puſtules are fully ripened.

604. Theſe are the meaſures propoſed and practiſed in the lateſt and moſt improved ſtate of inoculation; and the advantages obtained by the whole of the practice, or at leaſt by moſt of the

meaſures above mentioned, are now aſcertained by a long experience to amount to this, That, in ninety-nine caſes of the hundred, inoculation gives a diſtinct ſmall-pox only, and that alſo very generally of the mildeſt form: but it will ſtill be uſeful, for the proper conduct of inoculation, to conſider the importance and utility of the ſeveral meaſures above-mentioned, that we may thereby more exactly determine upon what the advantages of inoculation more certainly depend.

605. As the common infection may often ſeize perſons labouring under another diſeaſe, which may render the ſmall-pox more violent, it is obvious that inoculation muſt have a great advantage, by avoiding ſuch concurrence. But, as the avoiding ſuch concurrence may often, in the mean while, leave perſons expoſed to the common infection, it

merits inquiry, whether every diſeaſed ſtate ſhould reſtrain from the practice of inoculation, or what are the particular diſeaſes that ſhould do ſo. This is not yet ſufficiently aſcertained by obſervation; and we have frequently remarked, that the ſmall-pox have often occurred with a diſeaſed ſtate of the body, without being thereby rendered more violent. In particular, we have obſerved, that a ſcrophulous habit, or even the preſence of ſcrophula, did not render the ſmall-pox more violent; and we have obſerved alſo, that ſeveral diſeaſes of the ſkin are equally innocent, I am of opinion, that they are the diſeaſes of the febrile kind, or ailments ready to induce or aggravate a febrile ſtate, that eſpecially give the concurrence which is moſt dangerous with the ſmall-pox. I dare not attempt any general rules; but I am diſpoſed to maintain, that, though a perſon be in a diſeaſed ſtate, if that ſtate be of uncertain nature and effect, and at the ſame time the ſmall-pox be exceedingly rife, ſo as to render it extremely difficult to guard againſt the common infection, it will always be ſafer to give the ſmall-pox by inoculation, than to leave the perſon to take them by the common infection.

606. Though inoculation has been practiſed with ſafety upon perſons of all ages; yet, from what has actually occured in the caſes of common infection, and from ſeveral other conſiderations, there is reaſon to conclude, that adults are more liable to a violent diſeaſe than perſons of younger years. At the ſame time, it is obſerved, that children, in the time of their firſt dentition, are liable, from this irritation, to have the ſmall-pox rendered more violent; and that infants, before the time of dentition,

upon receiving the contagion of the ſmall-pox, are liable to be affected with epileptic fits, which frequently prove fatal. It is, therefore, upon the whole, evident, that, though circumſtances may admit, and even render inoculation at any age proper; yet, for the moſt part, it will be ſtill more adviſable to chooſe perſons at an age, after the firſt dentition is over and before the time of puberty.

607. Though inoculation has been practiſed with ſafety at every ſeaſon of the year; yet, as it is certain that the cold of winter may increaſe the inflammatory, and the heats of ſummer increaſe the putreſcent ſtate of the ſmall-pox, it is highly probable that inoculation may have ſome advantage, from avoiding the extremes either of heat or cold.

608. Although

608. Although the original temperament and conſtitutions of men are not to be readily changed; it is ſufficiently certain, that the conditions of the human body may, by various cauſes, in many reſpects be occaſionally very much changed: and therefore, as the uſe of animal food may increaſe both the inflammatory and putreſcent ſtate of the human body, ſo it muſt render perſons, on receiving the contagion of the ſmall-pox, leſs ſecure againſt a violent diſeaſe; and, therefore, inoculation may derive ſome advantage from abſtinence from animal food for ſome time before the inoculation is performed: but I am of opinion, that a longer time than that uſually preſcribed may be often neceſſary; and I am perſuaded, that the Scottiſh mothers, who avoid giving their children animal food till

they are paſt the ſmall-pox, render this diſeaſe in them of a milder kind.

609. I cannot deny that mercurial and antimonial medicines may have ſome effect in determining to a more free perſpiration, and therefore may be of ſome uſe in preparing a perſon for the ſmall-pox; but there are many obſervations which render me doubtful as to their effect. The quantity of both theſe medicines, particularly of the antimony, commonly employed, is too inconſiderable to produce any effect. It is true, that the mercurials have often been employed more freely; but even their ſalutary effects have not been evident, and their miſchievous effects have ſometimes appeared. I doubt, therefore, upon the whole, if inoculation derives any advantage from theſe pretended preparatory courſes of medicines.

610. As it has been often obſerved, in the caſe of almoſt all contagions, that cold, intemperance, fear, and ſome other circumſtances, concurring with the application of the contagion, have greatly aggravated the future diſeaſe, ſo it muſt be the ſame in the caſe of the ſmall-pox; and it is undoubted, that inoculation muſt derive a great, and perhaps its principal, advantage, from avoiding the concurrences above mentioned.

611. It has been commonly ſuppoſed, that inoculation has derived ſome advantage from the choice of the matter employed in it; but, from what has been obſerved in 595, it muſt appear very doubtful if any choice be neceſſary, or can be of any benefit in determining the ſtate of the diſeaſe*.

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* To remove all ſuſpicion, however, it is doubtleſs better to inoculate with matter taken from a mild ſtate of the diſeaſe.

612. It has been ſuppoſed by ſome, that inoculation has an advantage, by introducing a ſmall portion only of the contagious matter: But this reſts upon an uncertain foundation. It is not known what quantity is introduced by the common infection, and it may be a ſmall quantity only. Although it were larger than that thrown in by inoculation, it is not aſcertained that the circumſtance of quantity would have any effect. A certain quantity of ferment may be neceſſary to excite fermentation in a given maſs: but that quantity given, the fermentation and aſſimilation are extended to the whole maſs; and we do not find that a greater quantity than is juſt neceſſary, either increaſes the activity of the fermentation, or more certainly ſecures the aſſimilation of the whole. In the caſe of the ſmall-pox, a conſiderable difference

in the quantity of contagious matter introduced, has not diſcovered any effect in modifying the diſeaſe.

613. Purging has the effect of diminiſhing the activity of the ſanguiferous ſyſtem, and of obviating its inflammatory ſtate. It is therefore probable, that the frequent uſe of cooling purgatives is a practice attending inoculation which may be of conſiderable advantage; and, probably, it is alſo uſeful by diminiſhing the determination to the ſkin. It appears to me, that mercurials and antimonials, as they are commonly managed, are uſeful only as they make a part of the purging courſe *.

614. It

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* All purgatives are extremely nauſeous to children; and as it is of little conſequence what purgative we uſe, if

614. It is probable, that the ſtate of the ſmall-pox depends very much upon the ſtate of the eruptive fever, and particularly

if we only avoid the hot draſtic ſtimulants, we ought to pay attention to the agreeableneſs of the form. Children may in general be deceived by the following device: Put half an ounce of Senna leaves (after the ſtalks are all picked out) into a tea-pot, with a quarter of an ounce of green tea; pour on it a quart of boiling water. Let the child ſee it poured out into a tea-cup, ſweetened with plenty of moiſt ſugar, and cream put to it. The child will drink it with avidity. A tea-cupful may be given every hour till it begin to operate.

If this device ſhould fail a ſecond time, another may be uſed in its ſtead. Two drams of Senna-leaves, powdered, may be added to half a pound of ginger-bread paſte; the maſs may be divided into fifteen ſmall cakes to be baked: give the child one of theſe cakes every half-hour till it begins to operate, or till he has taken a ſufficient doſe for his age. A dram of jalap may be uſed inſtead of the Senna.

If

ticularly upon moderating the inflammatory ſtate of the ſkin; and, therefore, it is probable, that the meaſures taken for moderating the eruptive fe-

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If neither of theſe artifices ſucceed, a doſe of powdered ſenna, with or without a little ginger, may be given in orange marmalade.

Children will ſometimes eat as many tamarinds as will ſufficiently anſwer all the intentions of a formal purge. A little Caſſia-pulp, added to the tamarinds, will increaſe their activity, and will not be eaſily perceived by the child.

The empirics have committed many ſtrange chemical blunders in compounding their purges for inoculation. Dimſdale's powder may ſerve as an example: it conſiſts of tartar emetic, and crabs claws. The calcareous earth deprives the tartar emetic of its acid; in conſequence of which, the antimony will be inert, except it accidentally meets with an acid in the ſtomach; and even then the acid muſt be in ſuch a quantity as to ſaturate the crabs claws, before it can act on the antimonial calx.

ver and inflammatory ſtate of the ſkin, afford the greateſt improvement which has been made in the practice of inoculation. The tendency of purging, and the uſe of acids for this purpoſe, is ſufficiently obvious; and upon the ſame grounds, we ſhould ſuppoſe, that blood-letting might be uſeful; but probably this has been omitted, for the ſame reaſon that might perhaps have led to the omiſſion of other remedies alſo; which is, that we have found a more powerful and effectual one in the application of cold air, and the uſe of cold drink. Whatever doubts or difficulties our theory might preſent to us on this ſubject, they may be entirely neglected, as the practice of Indoſtan had long ago, and the practice of this country has lately, by a large and repeated experience, aſcertained the ſafety and efficacy of this remedy: and as it may and can be more certainly employed with the practice of inoculation, than it can be in caſes of common infection, it muſt give a ſingular advantage to the former*.

615. After the eruption, when a few pimples only have appeared on the face, the continuing the application of cold air, and the employment of purgatives, has indeed been the practice of many inoculators: but I think, theſe practices cannot be ſaid to give any peculiar advantages to inoculation; for when the ſtate of the eruption is de-

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* Notwithſtanding the juſtneſs of this remark, bleeding ought not to be employed, except in caſes where the phlogiſtic diatheſis and ſymptoms are violent: the fright which children ſuffer in conſequence of the operation, may be productive of much miſchief; and purgatives, when properly adminiſtered, ſuperſede the neceſſity of bleeding, eſpecially when the cold regimen is employed at the ſame time.

termined, when the number of puſtules is very ſmall, and the fever has entirely ceaſed, I hold the ſafety of the diſeaſe to be abſolutely aſcertained, and the further uſe of remedies entirely ſuperfluous. In ſuch caſes, I judge the uſe of purgatives to be not only unneceſſary, but that they may be often hurtful.

616. I have thus conſidered the ſeveral circumſtances and practices accompanying inoculation, and have endeavoured to aſcertain the utility and importance of each. Upon the whole, I hope I have ſufficiently aſcertained the general utility and great advantage of this practice, eſpecially conſiſting in this, that if certain precautions, preparations, and remedies, are of importance, all of them can be employed with more certainty in the practice of inoculation,

culation, than in the caſe of common infection [*].

It remains now that I ſhould offer ſome remarks on the conduct of the

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[*] The author ſeems to have forgotten a frequent conſequence of inoculation, that demands ſome attention, viz. an inflammation of the axillary glands, that often terminates in ſuppuration. Many caſes of this kind occcurred to me in practice, and I attempted ſeveral methods of preventing the ſuppuration; of which I found the following the moſt efficacious: If only one arm had been punctured, the gland of that arm, when ſuch an accident happened, and not of the other, was inflamed. In attempting the reſolution, which perhaps ſome practitioners may think improper, I applied cold compreſſes, impregnated with a ſolution of Saccharum Saturni, to the inflamed gland, and a warm poultice to the ulcer of the puncture. The conſequence was an increaſed diſcharge from the puncture, and a diminution of the axillary ſwelled gland.

No ill conſequences attended any of thoſe caſes where the tumour was thus reſolved; but when theſe tumours ſuppurate, they are apt to produce ſinous ulcers, very difficult to heal.

ſmall-pox, as received by infection, or even when, after inoculation, the ſymptoms ſhall prove violent. The latter ſometimes happens, although every precaution and remedy have been employed. The cauſe of this is not well known; but it appears to me to be commonly owing to a diſpoſition of the fluids to putreſcency. But, however this may be, it will appear, that, not only in the caſe of common infection, but even in that of inoculation, there may be occaſion for ſtudying the conduct of this diſeaſe, in all its poſſible varying circumſtances.

617. When, from the prevailing of ſmall-pox as an epidemic, and more eſpecially when it is known that a perſon not formerly affected with the diſeaſe has been expoſed to the infection, if ſuch perſon ſhould be ſeized with the ſymptoms of fever, there can be little doubt

of its being an attack of the ſmall-pox; and therefore he is to treated in every reſpect as if the diſeaſe had been received by inoculation. He is to be freely expoſed to a cool air, to be purged, and to have cooling acids given liberally *.

618. If theſe meaſures moderate the fever, nothing more is neceſſary: But if the nature of the fever attacking a perſon be uncertain; or if, with ſuſpicions of the ſmall-pox, the ſymptoms of the fever be violent; or even if, knowing the diſeaſe to be ſmall-pox, the meaſures mentioned

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* The cooling acids have been deſcribed in former notes, in the firſt volume, pages 165 and 169. Whey made with cream of tartar is very uſeful in the ſmall-pox, as it is a cooling drink, and at the ſame time laxative. It is made by throwing into a quart of boiling milk half an ounce or ſix drams of powdered cream of tartar.

597, ſhall not moderate the fever ſufficiently; it will be proper to let ſome blood: and this will be more eſpecially proper, if the perſon be an adult, of a plethoric habit, and accuſtomed to full living *.

619. In the ſame circumſtances, we judge it will be always proper to give a vomit, as uſeful in the commencement of all fevers, and more eſpecially in this, where a determination to the ſtomach appears from pain and ſpontaneous vomiting.

620. It frequently happens, eſpecially in infants, that, during the eruptive fever of the ſmall-pox, convulſions occur. Of theſe, if only one or two fits

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* This practice is moſt judicious, and ought to be ſtrictly followed.

fits appear in the evening preceding the eruption, they give a favourable prognoſtic of a mild diſeaſe, and require no remedy; but if they occur more early, and be violent and frequently repeated, they are very dangerous, and require a ſpeedy remedy. For this purpoſe, bleeding is hardly ever of ſervice; bliſtering always comes too late; and the only remedy I have found effectual, is an opiate given in a large doſe *.

621. Theſe are the remedies neceſſary during the eruptive fever; and if,

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* The doſes for children in theſe caſes are as follow: A child of half a year, 5 drops of Laudanum: From half a year to a year, 6 drops: From one to two years, 7 or 8: From two to three, 9 or 10: Five years, 12, or at moſt 15. Theſe are large doſes, and are ſuch as are only to be given to robuſt children.

upon the eruption, the pimples of the face be very few and diſtinct, the diſeaſe is no further of any danger, requires no remedies, and the purgatives, which, as has been ſaid before, are by ſome practitioners continued, prove often hurtful.

But when, upon the eruption, the pimples on the face are very numerous; when they are not diſtinct; and eſpecially when, upon the fifth day, the fever does not ſuffer a conſiderable remiſſion *; the diſeaſe will ſtill require a great deal of attention.

622. If,

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* The practitioner ought to be particularly attentive to the ſymptoms which appear on the fifth day. The ſubſequent paragraphs render any farther remarks needleſs.

622. If, after the eruption, the fever ſhall continue; the avoiding heat, and the continuing to expoſe the body to a cool air, will ſtill be proper. If the fever be conſiderable, with a full and hard pulſe, in an adult perſon, a bleeding will be neceſſary; and, more certainly, a cooling purgative. It is, however, ſeldom that a repetition of the bleeding will be proper, as a loſs of ſtrength does uſually come on very ſoon; but the repetition of a purgative, or the frequent uſe of laxative glyſters, is commonly uſeful *.

623. When

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* Laxative glyſters are preferable to repeated purgatives, on account of their not debilitating the patient ſo much as purgatives. The following form has been found very effectual:

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623. When a loſs of ſtrength, with other marks of a putreſcent tendency of the fluids, appears, it will be neceſſary to exhibit the Peruvian bark in ſubſtance, and in large quantity [*]. In the ſame caſe, the free uſe of acids, and

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R. Fol. Sennæ, ℥ ß
Sal. cathartic. amar. ℥ i.
Aq. bullient. ℔ i.
Colaturæ frigidæ adde.
Syr. e Spin. Cervin. ℥ i.
Ol. Olivar. ʒ ß
M.

Or even a ſimple ſolution of Epſom ſalt in warm water.

[*] The method of giving the bark in the ſmall-pox, is the ſame with that mentioned in the note on article 317. For children, the glyſter there mentioned, is extremely convenient, and proves wonderfully efficacious.

and of nitre *, is uſeful; and it is commonly proper alſo to give wine very freely †.

624. From the fifth day of the diſeaſe, onward through the whole courſe of it, it is proper to give an opiate once or twice a day; taking care, at the ſame time, to obviate coſtiveneſs, by purgatives, or laxative glyſters.

625. In a violent diſeaſe, from the eighth to the eleventh day, it is proper to lay on bliſters ſucceſſively on diffe-

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* The Spiritus Nitri dulcis is the beſt form in which nitre can be given to children. See the notes on article 131.

† The wine beſt ſuited to theſe caſes is port wine: but as children ſometimes loath it, good claret may be ſubſtituted in its place.

different parts of the body, and that without regard to the parts being covered with puſtules.

626. If, in this diſeaſe, the tumour of the fauces be conſiderable; the deglutition difficult; the ſaliva and mucus viſcid, and with difficulty thrown out; it will be proper to apply bliſters to the external fauces, and to employ diligently detergent gargles *.

627. During the whole courſe of the diſeaſe, when any conſiderable fever is preſent, the frequent exhibition of antimonial medicines, in nauſeating doſes,

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* The beſt detergent gargles in this caſe are the tincture of roſes with honey; or the gargle of ſage and roſe-tea, with vinegar and honey, mentioned in the note on article 317; or Dr Fothergill's gargle deſcribed in that note.

doſes, has been found uſeful *; and theſe, for the moſt part, ſufficiently anſwer the purpoſe of purgatives.

628. The remedies mentioned from 622, to 626, are thoſe frequently neceſſary, from the fifth day, till the ſuppuration is finiſhed. But as, after that period, the fever is ſometimes continued and increaſed; or, as ſometimes, when, after there has been little or no fever before, a fever now ariſes, and

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* A ſolution of two grains of emetic tartar in eight ounces of water anſwers this intention very effectually. The doſe is to be determined by the nauſeating effect produced: a table ſpoonful of the ſolution may be given occaſionally every two or three hours. Care, however, muſt be taken, that vomiting is not produced: and, at the ſame time, a ſufficient quantity muſt be given to produce a nauſea. Both theſe circumſtances depend on the age, ſtrength, and conſtitution of the patient and on the violence of the diſeaſe.

and continues with conſiderable danger; this is what is called the Secondary Fever, and requires particular treatment.

629. When the ſecondary fever follows the diſtinct ſmall-pox, and the pulſe is full and hard, the caſe is to be treated as an inflammatory affection, by bleeding and purging. But, if the ſecondary fever follow the confluent ſmall-pox, and be a continuance or exacerbation of the fever which had ſubſiſted before, it is to be conſidered as of the putrid kind; and in that caſe, bleeding is improper. Some purging may be neceſſary; but the remedies to be chiefly depended on, are the Peruvian bark and acids*.

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* The ſecondary fever is always the worſt, and moſt dangerous ſtage of the diſeaſe. In the diſtinct ſmall-pox, it

When the ſecondary fever firſt appears, whether it is after a diſtinct or a confluent ſmall-pox, it will be uſeful to exhibit an antimonial emetic in nauſeating doſes, but in ſuch a manner as to produce ſome vomiting.

630. For

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it ſeldom occurs; but it is a conſtant attendant on the confluent kind. It ſeems to be owing to the abſorption of the matter; for it never appears, evidently at leaſt, till after the ſuppuration: and, *ceteris paribus*, it is always more violent in proportion to the quantity of puſtules. Some authors recommend opening the puſtules, in order to evacuate the matter, as a preventative againſt the ſecondary fever; and when the eruption is large, this practice is adviſable.

The Peruvian bark muſt be given in theſe caſes in the largeſt quantities that the ſtomach can bear, and alſo in glyſters as formerly mentioned. Some practitioners, beſide the internal uſe of bark, and giving it in glyſters, have adviſed it to be applied externally by throwing the dry powder on thoſe parts of the body that are the moſt exulcerated.

630. For avoiding the pits which frequently follow the ſmall-pox, many different meaſures have been propoſed; but none of them appear to be ſufficiently certain *.

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* The moſt effectual means of preventing pits, are to avoid much expoſure to the cold air, to anoint the face with oil, &c.

CHAP. II.

OF THE

CHICKEN-POX.

631. THIS diſeaſe ſeems to depend upon a ſpecific contagion, and to affect perſons but once in their lives. It is hardly ever ateended with any danger; but as it ſeems frequently to have given occaſion to the ſuppo-

ſition of a perſon's having the ſmall-pox twice, it is proper to ſtudy this diſeaſe, and to diſtinguiſh it from the genuine ſmall-pox *.

632. This may be generally done by attending to the following circumſtances.

The eruption of the chicken-pox comes on with very little fever preceding it, or with fever of no determined duration.

The pimples of the chicken-pox, more quickly than thoſe of the ſmall-pox,

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* As this diſeaſe is generally mild, and ſcarcely ever requires the aſſiſtance of art in the cure, the author very properly paſſes it over in a curſory manner. It ſometimes, however, very much reſembles the mild ſmall-pox; and in ſuch caſes may require the treatment which has been recommended as ſerviceable in that diſeaſe.

pox, are formed into little veſicles or puſtules.

The matter in theſe puſtules remains fluid, and never acquires the colour or conſiſtence of the pus which appears in the puſtules of the ſmall-pox.

The puſtules of the chicken-pox are always in three or four days from their firſt appearance, formed into cruſts.

See Dr Heberden in Med. Tranſact. Vol. I. art. xvii.

CHAP. III.

OF THE

MEASLES.

633. THIS diſeaſe alſo depends upon a ſpecific contagion, and affects perſons but once in their lives.

634. It occurs moſt frequently in children but no age is exempted from it, if the perſons have not been ſubjected to it before.

635. It commonly appears as an epidemic, firſt in the month of January, and ceaſes ſoon after the ſummer ſolſtice; but various accidents, introducing the contagion, may produce the diſeaſe at other times of the year.

636. The diſeaſe always begins with a cold ſtage, which is ſoon followed by a hot, with the ordinary ſymptoms of thirſt, heat, anorexia, anxiety, ſickneſs, and vomiting; and theſe are more or leſs conſiderable in different caſes. Sometimes from the beginning, the fever is ſharp and violent; often, for the firſt two days, it is obſcure and inconſiderable, but always becomes violent

before the eruption, which uſually happens upon the fourth day.

637. This eruptive fever, from its commencement, is always attended with hoarſeneſs, with a frequent hoarſe dry cough, and frequently with ſome difficulty of breathing. At the ſame time, the eye-lids are ſomewhat ſwelled, the eyes are a little inflamed, and pour out tears; and, together with theſe ſymptoms, there is a coryza, and frequent ſneezing. For the moſt part, a conſtant drowſineſs attends the beginning of this diſeaſe.

638. The eruption, as we have ſaid, commonly appears upon the fourth day, firſt on the face, and ſucceſſively on the lower parts of the body. It diſcovers itſelf firſt in ſmall red points; but, ſoon after, a number of them appear in cluſters, which do not riſe into viſible pimples,

but by the touch are found to be a little prominent. This is the caſe on the face; but on other parts of the body, the prominence, or roughneſs, is hardly to be perceived. On the face the eruption retains its redneſs, or has that increaſed for two days: but, on the third, the vivid redneſs is changed to a browniſh red: and, in a day or two more, the eruption entirely diſappears, while a meally deſquamation takes place. During the whole time of the eruption, the face is ſomewhat turgid, but ſeldom conſiderably ſwelled.

639. Sometimes, after the eruption has appeared, the fever ceaſes entirely: but this is ſeldom the caſe; and more commonly the fever continues, or is increaſed after the eruption, and does not ceaſe till after the deſquamation. Even then the fever does not always ceaſe, but

continues with various duration and effect.

640. Though the fever happen to ceaſe, upon the eruption's taking place, it is common for the cough to continue till after the deſquamation, and ſometimes much longer.

In all caſes, while the fever continues, the cough alſo continues, generally with an increaſe of the difficulty of breathing; and both of theſe ſymptoms ariſe to a degree that denotes a pneumonic affection. This may ariſe at any period of the diſeaſe; but very often it does not come on till after the deſquamation of the eruption.

After the ſame period, alſo, a diarrœa frequently comes on, and continues for ſome time.

641. It is common for the meaſles, even when they have not been of a violent kind, to be ſucceeded by inflammatory affections, particularly ophthalmia and phthiſis.

642. If the blood be drawn from a vein during the meaſles, with the circumſtances neceſſary to favour the ſeparation of the gluten, this always appears ſeparated, and lying on the ſurface of the craſſamentum, as in inflammatory diſeaſes.

643. For the moſt part the meaſles, even when violent, are without any putrid tendency; but in ſome caſes ſuch a tendency appears, both in the courſe of the diſeaſe, and eſpecially after the ordinary courſe of it is finiſhed. See Dr Watſon, in London Med. Obſervations, Vol. IV. art. xi.

644. From what is delivered, from 637. to 642, it will appear, that the meaſles are diſtinguiſhed by a catarrhal affection, and by an inflammatory diatheſis to a conſiderable degree; and therefore the danger attending them ariſes chiefly from the coming on of a pneumonic inflammation.

645. From this conſideration it will be obvious, that the remedies eſpecially neceſſary, are thoſe which may obviate and diminiſh the inflammatory diatheſis; and therefore, in a particular manner, blood-letting. This remedy may be employed at any time in the courſe of the diſeaſe, or after its ordinary courſe is finiſhed. It is to be employed more or leſs according to the urgency of the ſymptoms of fever, cough, and dyſpnœa; and generally may be employed very

freely*. But, as the ſymptoms of pneumonic inflammation ſeldom come on during the eruptive fever; and, as this fever is ſometimes violent immediately before the eruption, though a ſufficiently mild diſeaſe be to follow; ſo bleeding is ſeldom very neceſſary during the eruptive fever, and may often be reſerved for the periods of greater danger which are perhaps to enſue.

646. In all caſes of meaſles, where there are no marks of putreſcency, and where there is no reaſon, from the known nature of the epidemic, to apprehend putreſcency, bleeding is the remedy to be depended upon: but aſſiſtance may

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* Bleeding ought to be uſed where it is abſolutely neceſſary; but, too free a uſe of it has been attended with a long continued weakneſs, and a very ſlow recovery.

alſo be obtained from cooling purgatives; and particularly from bliſtering on the ſides, or between the ſhoulders.

647. The dry cough may be alleviated by the large uſe of demulcent pectorals, mucilaginous, oily, or ſweet.* It may,

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* Two ounces of pearl-barley, and four ounces of dried figs, cut, boiled in a gallon of water to 3 quarts, is a good drink in theſe caſes. If the patient loaths this drink, Lintſeed tea, or a ſlight infuſion of Orris root in boiling water, may be ſubſtituted in its place, or a ſolution of an ounce of gum arabic in a pint of water.

Oily emulſions, are alſo recommended; the moſt uſual is the following:

R. Ol. Amygdal. ℥ ii.
Aq. Font. ℥ vi.
Alkali Cauſtic. q. s. ut fiat Emulſ. cui adde
Syrup. Althææ, ℥ ii.

The patient may take half a tea cup full of this Emulſion occaſionally, when the cough is moſt troubleſome. The cough may alſo be relieved, by taking now and then a tea ſpoonful of the following Linctus:

R.

however, be obſerved, with reſpect to theſe demulcents, that they are not ſo powerful in involving and correcting the acrimony of the maſs of blood as has been imagined; and that their chief operation is by beſmearing the fauces, and thereby defending them from the irritation of acrids, either ariſing from the lungs, or diſtilling from the head.

648. For moderating and quieting the cough in this diſeaſe, opiates certainly prove the moſt effectual means, whenever they can be ſafely employed. In the

meaſles,

R. Ol. Amygdal.
Syrup. Althææ.
Conſerv. Cynoſbat. āā. ℥ i.
M. f. Linct.

Or the following:
R. Mel. anglic.
Ol. Amygdal. āā ℥ ii.
Succ. Limon. ℥ i.
M. f. Linct.

meaſles, in which an inflammatory ſtate prevails in a conſiderable degree, opiates may be ſuppoſed to be inadmiſſible; and, in thoſe caſes in which a high degree of pyrexia and dyſpnœa ſhow either the preſence or at leaſt the danger, of pneumonic inflammation I think that opiates might be very hurtful. In caſes however, in which the dyſpnœa is not conſiderable, and where bleeding, to obviate or abate the inflammatory ſtate, has been duly employed, and where the cough and watchfulneſs are the urgent ſymptoms, I think that opiates may be ſafely exhibited, and with great advantage*. I

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* Opiates, in all inflammatory caſes ought to be cautiouſly uſed. The danger ariſing from them is conſiderably obviated, by uſing only the gummy part of the opium, and therefore the watery ſolution of opium, is in theſe caſes preferable to any other form.

The

I think, further, that, in all the exanthemata, there is an acrimony diffuſed over the ſyſtem, which gives a conſiderable irritation; and, for obviating the effects of this, opiates are uſeful, and always proper, when no particular contra-indication prevails.

649. When the deſquamation of the meaſles is finiſhed, though there ſhould then be no diſorder remaining, phyſicians have thought it neceſſary to purge the patient ſeveral times with a view to draw off the dregs of this diſeaſe, that is

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The Syrupus papaveris albi, is an opiate peculiarly adapted to this diſeaſe; the doſe of it is immaterial, provided, we do not exceed four ounces in the four and twenty hours; a table ſpoonful may be taken when the cough is troubleſome, and may be repeated every two or three hours according to the urgency of the ſymptoms.

is, a portion of the morbific matter which is ſuppoſed to remain long in the body. I cannot reject this ſuppoſition; but, at the ſame time, cannot believe, that the remains of the morbific matter, diffuſed over the whole maſs of blood, can be entirely drawn off by purging; and it appears to me, that, to avoid the conſequences of the meaſles, it is not the drawing off the morbific matter which we need to ſtudy, ſo much as the obviating and removing the inflammatory ſtate of the ſyſtem which had been induced by the diſeaſe. With this laſt view, indeed, purging may ſtill be a proper remedy; but bleeding, in proportion to the ſymptoms of inflammatory diſpoſition, is yet more ſo *.

650. From

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* The complaints which the meaſles leave are chiefly pneumonic. The Cough is the moſt troubleſome ſymptom,

. 650 From our late experience of the benefit of cold air in the eruptive fever of

ſymptom, and to relieve the patient from it, not only bleeding and purging muſt be uſed, but expectorants ought alſo to be adminiſtered. The Lac Ammoniacum, formerly mentioned has often proved beneficial.

On the ſuppoſition, that the cough and pneumonic affection remaining after the meaſles are owing to a peculiar acrimony, ſome practitioners have recommended alteratives and demulcents: Experience, however has found little advantage from their uſe. I once ſaw a body opened, that had died 32 days after the eruption: the internal ſurface of the bronchiæ were covered with ſmall furfuraceous ſcales, ſomewhat like thoſe that appear on the ſkin when the eruption goes off. Hence I have been induced to ſuppoſe, that expectorants are the beſt remedies in theſe caſes, and indeed, experience confirms the practice. Bleeding and purging are, only to be occaſionally uſed, in order to prevent the inflammation.

The beſt method of avoiding the ill conſequences that follow the diſeaſe, is a free uſe of demulcent drinks, during the eruption, and of expectorants immediately after it. The Decoctum hordei compoſitum, of the London of the ſmall-pox, ſome phyſicians have been of opinion, that the practice might be transferred to the meaſles; but we have not yet had trials ſufficient to aſcertain this. There is no doubt that external heat may be very hurtful in the meaſles, as in moſt other inflammatory diſeaſes; and therefore the body ought to be kept in a moderate temperature during the whole courſe of the meaſles; but how far at any period of the diſeaſe, cold air may be applied with ſafety, we are yet uncertain. Analogy, though ſo often

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London pharmacopœia is peculiarly adapted to theſe caſes, but it is much improved by adding half an ounce of Orrice root, when it is nearly boiled enough: If the orrice be added too ſoon the efficacious part of it evaporates. The Lac Ammoniacum above mentioned, is a very proper expectorant, but if it ſhould prove too nauſeous, or, through uſe, be loathed by the patient, recourſe may be had to the weak ſolution of the Tartar Emetic, ſo often mentioned in theſe notes.

often the reſource of phyſicians, is, in general, fallacious; and further, tho' the analogy with the ſmall-pox might lead to the application of cold air during the eruptive fever of the meaſles, the analogy with catarrh ſeems to be againſt the practice. After the eruption had appeared upon the ſkin, we have had many inſtances of cold air making it diſappear, and thereby producing much diſorder in the ſyſtem; and have alſo had frequent examples of ſuch diſorder being removed by reſtoring the heat of the body, and thereby again bringing forth the eruption*.

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* Though the application of cold air be dangerous, yet ventilation is of conſiderable uſe in the meaſles; as is alſo a frequent change of linen, and cleanlineſs.

CHAP. IV.

OF THE

SCARLET FEVER.

651. IT may be doubted if the ſcarlet fever be a diſeaſe ſpecifically different from the the cynanche maligna above deſcribed. The latter is almoſt always attended with a ſcarlet eruption; and, in all the inſtances I have ſeen of

what may be called the ſcarlet fever, the diſeaſe, in almoſt every perſon affected, has been attended with an ulcerous ſore throat.

652. This view of the matter may create ſome doubt; but I am ſtill of opinion, that there is a ſcarlet fever which is a diſeaſe ſpecifically different from the cynanche maligna.

Doctor Sydenham has deſcribed a ſcarlet fever, which he had ſeen prevailing as an epidemic, with all the circumſtances of the fever and eruption, without its being accompanied with any affection of the throat; at leaſt he does not take notice of any ſuch affection, which ſuch an accurate obſerver could not fail to have done, if any ſuch ſymptom, as we have commonly ſeen making a principal part of the diſeaſe, had attended thoſe caſes which he had obſerved. Several other writers have deſcribed the ſcarlet fever in the ſame manner, and I know phyſicians who have ſeen the diſeaſe in that form; ſo that there can be no doubt of there being a ſcarlet fever not neceſſarily connected with an ulcerous ſore throat, and therefore a diſeaſe different from the cynanche maligna.

653. But, further, although in all the inſtances of ſcarlet fever which I have ſeen, (and in the courſe of forty years I have ſeen it ſix or ſeven times prevailing as an epidemic in Scotland), the diſeaſe, in almoſt all the perſons affected, was attended with an ulcerous ſore throat, or was what Sauvages names the Scarlatina Anginoſa: and although, in ſome inſtances, the ulcers of the throat were of a putrid and gangrenous kind, and at the ſame time the diſeaſe in all its ſymptoms reſembled very exactly the

cynanche maligna; yet, I am ſtill perſuaded, that not only the ſcarlatina of Sydenham, but that even the ſcarlatina anginoſa of Sauvages, is a different diſeaſe from the cynanche maligna; and I have formed this opinion from the following conſiderations.

654. 1*ſt*, There is a ſcarlet fever entirely free from any affection of the throat, which ſometimes prevails as an epidemic; and therefore there is a ſpecific contagion producing a ſcarlet eruption without any determination to the throat.

2*dly*, The Scarlatine, which, from its matter being generally determined to the throat, may be properly termed Anginoſa, has, in many caſes of the ſame epidemic, been without any affection of the throat; and therefore the contagion may be ſuppoſed to be more eſpecially determined to produce the eruption only.

3dly, Though in all the epidemics that I could allege to be thoſe of the ſcarlatina anginoſa, there have been ſome caſes which, in the nature of the ulcers, and in other circumſtances, exactly reſembled the caſes of the cynanche maligna; yet I have as conſtantly remarked, that theſe caſes have not been above one or two in a hundred, while the reſt have all of them been with ulcers of a benign kind, and with circumſtances hereafter to be deſcribed, ſomewhat different from thoſe of the cynanche maligna.

4thly, On the other hand, as I have two or three times ſeen the cynanche maligna epidemically prevailing; ſo, among the perſons affected, I have ſeen inſtances of caſes as mild as thoſe of the ſcarlatina anginoſa uſually are: but here the proportion was reverſed; and theſe mild caſes were not one fifth of the whole, while the reſt were of the putrid and malignant kind.

Laſtly, It applies to the ſame purpoſe to obſerve, that, of the cynanche maligna, moſt of the inſtances terminate fatally; while, on the other hand, that is the event of very few of the caſes of the ſcarlatina anginoſa.

655. From theſe conſiderations, though it may appear that there is ſome affinity between the cynanche maligna and ſcarlatina anginoſa, it will ſtill remain probable that the two diſeaſes are ſpecifically different. I have been at ſome pains to eſtabliſh this opinion: for, from all my experience, I find, that thoſe two diſeaſes require a different treatment; and I therefore now proceed to mention more particularly the circumſtances of the ſcarlatina anginoſa.

656. This diſeaſe commonly appears about the beginning of winter, and continues throughout the ſeaſon. It comes on with ſome cold ſhivering, and other ſymptoms of the fever which uſually introduces the other exanthemata. But here there is no cough, nor the other catarrhal ſymptoms which attend the meaſles; nor is there that anxiety and vomiting which commonly introduce the confluent ſmall-pox, and which more certainly introduce the Cynanche Maligna.

Early in the diſeaſe, ſome uneaſineſs is felt in the throat; and frequently the deglutition is difficult, generally more ſo than in the Cynanche Maligna. Upon looking into the fauces, a redneſs and ſwelling appear in colour and bulk approaching to the ſtate of theſe ſymptoms in the Cynanche

Tonſillaris; but, in the Scarlatina, there is always more or leſs of ſloughs, which ſeldom appear in the Cynanche Tonſillaris; and the ſloughs are commonly whiter than in thoſe in the Cynanche Maligna.

While theſe appearances are diſcovered in the fauces, upon the third or fourth day a ſcarlet eruption appears on the ſkin, in the ſame form as deſcribed in 314. This eruption is commonly more conſiderable and univerſal than in the Cynanche; but it ſeldom produces a remiſſion of the fever. The eruption for the moſt part remains till the third or fourth day after its firſt appearance; but then goes off, ending in a meally deſquamation. At this time the fever uſually ſubſides; and generally, at the ſame time, ſome degree of ſweat comes on.

The ſloughs on the fauces, which appeared early in the diſeaſe, continue for ſome days ; but then falling off, diſcover the ſwelling abated, and an ulcer formed on one or both tonſils ſhowing a laudable pus ; and ſoon after the fever has ſubſided, theſe ulcers heal up entirely. For the moſt part this diſeaſe has much leſs of coryza attending it than the Cynanche Maligna ; and, when there is a coryza attending the Scarlatina, the matter diſcharged is leſs acrid, and has not the fetid ſmell which it has in the other diſeaſe.

In the Scarlatina, when the eruption has entirely diſappeared, it frequently happens, that, in a few days after, the whole body is affected with an anaſarcous ſwelling ; which, however, in a few days more, gradually ſubſides.

We have thus deſcribed the moſt common circumſtances of the Scarlatina Anginoſa; and have only to add, that, during the time of its being epidemic, and eſpecially upon its firſt ſetting in, there are always a few caſes in which the circumſtances of the diſeaſe approach very nearly to thoſe of the Cynanche Maligna; and it is only in the ſeinſtances that the diſeaſe is attended with any danger *.

657. With

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* Theſe caſes in which the diſeaſe is attended with danger, are, however, very few, and are only the effect of art. Teazing the patient by doing too much; tormenting him with a cloſe confinement to his bed, well furniſhed with blankets; and adding fuel to the flame, by forcing him to ſwallow large quantities of cordials and alexipharmacs, are the ſure methods of increaſing the diſeaſe: and the patient, diſtreſſed by the exceſſive officiouſneſs of his ſage doctor, is obliged to take refuge in the arms of Death.

657. With reſpect to the cure of this diſeaſe, when the ſymptoms of it are nearly the ſame with thoſe of the Cynanche Maligna, it requires exactly the ſame treatment as directed in 317.

658. When the ſcarlet fever appears, without any affection of the throat, the treatment of it is very ſimple, and is delivered by Dr Sydenham. An antiphlogiſtic regimen * is commonly all that is requiſite; avoiding, on one hand, the application of cold air; and on the other, any increaſe of external heat.

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* The antiphlogiſtic regimen muſt not however be carried too far, leſt we induce a ſtate of debility that may prove hurtful.

659. In the ordinary ſtate of the Scarlatina Anginoſa, the ſame treatment is, in moſt caſes, ſufficient; but as here the fever is commonly more conſiderable, and there is likewiſe an affection of the throat, ſome remedies may be often neceſſary.

660. When there is a pretty high degree of fever, with a full pulſe, and a conſiderable ſwelling of the tonſils, bleeding is very proper, eſpecially in adults; and it has been frequently practiſed with advantage: but as, even in the Cynanche Tonſillaris, much bleeding is ſeldom neceſſary (305.); ſo, in the Scarlatina, when the ſtate of the fever and the appearances of the fauces render the nature of the diſeaſe ambiguous, bleeding may be omitted; and, if not altogether avoided, it ſhould

at leaſt not be large, and ought not to be repeated.

661. Vomiting, and eſpecially nauſeating doſes of emetics *, notwithſtanding the inflamed ſtate of the fauces, have been found very uſeful in this diſeaſe. An open belly is proper in every form of this diſeaſe; and when the nauſeating doſes of emetics operate a little downwards, they are more ſerviceable.

662. In every form of the Scarlatina Anginoſa, through the whole courſe of it, detergent gargles † ſhould be employed,

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* Theſe have been mentioned in former notes.

† The detergent gargles were deſcribed in the note on ſection 317. Tincture of roſes is generally uſed, and in moſt caſes anſwer every intention: If, however, the ulceration

ployed, and more or leſs as the quantity of ſloughs and the viſcid mucus in the fauces may ſeem to require.

663. Even in the milder ſtates of the Scarlatina Anginoſa, it has been common with practitioners to exhibit the Peruvian bark through the whole courſe of the diſeaſe; but we are aſſured, by much experience, that in ſuch caſes it may be ſafely omitted, though in caſes any ways ambiguous it may not be prudent to neglect this remedy.

664. The anaſarcous ſwelling, which frequently follows the Scarlatina Anginoſa, ſeldom requires any remedy; and,

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ceration is conſiderable, and the ſloughs do not eaſily caſt off, recourſe muſt be had to Dr Fothergill's gargle, deſcribed in article 317.

and, at leaſt, the purgatives ſo much inculcated, and ſo commonly exhibited, ſoon take off the anaſcarca.

CHAP. V.

OF THE PLAGUE.

SECT. I.

Of the Phenomena of the Plague.

665. THE Plague is a diſeaſe which always ariſes from contagion; which affects many perſons about the ſame time; proves fatal to great numbers; generally produces fever; and, in moſt

perſons, is attended with buboes or carbuncles.

666. Theſe are the circumſtances which, taken together, give the character of the diſeaſe; but it is accompanied with many ſymptoms almoſt peculiar to itſelf, that, in different perſons, are greatly diverſified in number and degree, and ſhould be particularly ſtudied. I would wiſh to lay a foundation for this; but think it unfit for a perſon who has never ſeen the diſeaſe to attempt its particular hiſtory. For this, therefore, I muſt refer to the authors who have written on the ſubject; but allowing thoſe only to be conſulted, who have themſelves ſeen and treated the diſeaſe in all its different forms.

667. From the accounts of ſuch authors, it appears to me, that the cir-

cumſtances which particularly diſtinguiſh this diſeaſe, and eſpecially the more violent and dangerous ſtates of it, are,

1*ſt*, The great loſs of ſtrength in the animal functions, which often appears early in the diſeaſe.

2*dly*, The ſtupor, giddineſs, and conſequent ſtaggering, which reſembles drunkenneſs, or the headach and various delirium; which are all of them ſymptoms denoting a great diſorder in the functions of the brain.

3*dly*, The anxiety, palpitation, ſyncope, and eſpecially the weakneſs and irregularity of the pulſe, which denote a conſiderable diſturbance in the action of the heart.

4*thly*, The nauſea and vomiting, particularly the vomiting of bile, which ſhows an accumulation of vitiated bile in the gall-bladder and biliary ducts, and from thence derived into the inteſtines and ſtomach; all of which ſymptoms I ſuppoſe to denote a conſiderable ſpaſm, and loſs of tone, in the extreme veſſels on the ſurface of the body.

5thly, The buboes or carbuncles, which denote an acrimony prevailing in the fluids. And,

Laſtly, The petechiæ, hemorrhagies, and colliquative diarrhœa, which denote a putreſcent tendency prevailing to a great degree in the maſs of blood.

668. From the conſideration of all theſe ſymptoms, it appears, that the plague is eſpecially diſtinguiſhed by a ſpecific contagion, often ſuddenly producing the moſt conſiderable ſymptoms

of debility in the nervous ſyſtem or moving powers, as well as of a general putreſcency in the fluids; and it is from the conſideration of theſe circumſtances as the proximate cauſe, that I think both the prevention and cure of the plague muſt be directed.

669. If this diſeaſe ſhould reviſit the northern parts of Europe, it is probable, that, at the time, there will be no phyſician then alive, who, at the firſt appearance of the diſeaſe, can be guided by his former experience, but muſt be inſtructed by his ſtudy of the writers on this ſubject, and by analogy. It is, therefore, I hope allowable for me, upon the ſame grounds, to offer here my opinion with reſpect to both the prevention and cure of this diſeaſe.

This paragraph was written before I had any notice of the plague of Moſcow anno 1771; but I think it will ſtill apply to the caſe of Great Britain and of many other northern ſtates.

SECT.

SECT. II.

OF THE PREVENTION OF THE PLAGUE.

670. WITH reſpect to the prevention: As we are firmly perſuaded that the diſeaſe never ariſes in the northern parts of Europe, but in conſequence of its being imported from ſome other country; ſo the firſt meaſure neceſſary,

is the magiſtrate's taking care to prevent the importation: and this may generally be done by a due attention to bills of health, and to the proper performance of quarantains.

671. With reſpect to the latter, we are perſuaded, that the quarantains of perſons may ſafely be much leſs than forty days; and, if this were allowed, the execution of the quarantain would be more exact and certain, as the temptation to break it would be in a great meaſure removed.

672. With reſpect to the quarantain of goods, it cannot be perfect, unleſs the ſuſpected goods be unpacked and duly ventilated, as well as the other means employed for correcting the infection they may carry; and, if all this were properly done, it is probable that the time commonly preſcri-

bed for the quarantain of goods might alſo be ſhortened.

673. A ſecond meaſure, in the way of prevention, becomes requiſite, when an infection has reached and prevailed in any place, to prevent that infection from ſpreading into other places. This can be done only by preventing the inhabitants, or the goods of any infected place, from going out of it, till they have undergone a proper quarantain.

674. The third meaſure for prevention, to be employed with great care, is to hinder the infection from ſpreading among the inhabitants of the place in which it has ariſen. The meaſures neceſſary for this, are to be directed by the doctrine laid down in 82; and from that doctrine, we infer, that all perſons who can avoid

void any near communication with infected perſons or goods, may eſcape the infection.

675. For avoiding ſuch communication, a great deal may be done by the magiſtrate: 1. By allowing as many of the inhabitants as are free from the infection, and not neceſſary to the ſervice of the place, to go out of it. 2. By prohibiting all aſſemblies, or unneceſſary intercourſe of the people. 3. By taking care that neceſſary communications be performed without contact. 4. By making ſuch arrangements and proviſions, as may render it eaſy for the families remaining, to ſhut themſelves up in their own houſes. 5. By allowing perſons to quit houſes in which an infection appears, upon condition that they go into lazarettoes. 9. By ventilating and puryfying, or deſtroying, at the public expence, all

infected goods. Laſtly, By avoiding hoſpitals, and providing ſeparate apartments for infected perſons.

The execution of theſe meaſures will require great authority, and much vigilance and attention, on the part of the magiſtrate; but it is not our province to enter into any detail on the ſubject of the public police.

676. The fourth and laſt part of the buſineſs of prevention, reſpects the conduct of perſons neceſſarily remaining in infected places, eſpecially of thoſe obliged to have ſome communication with perſons infected.

677. Of thoſe obliged to remain in infected places but not obliged to have any near communication with the ſick, they may be preſerved from the contagion by avoiding all near communi-

cation with other perſons, or their goods; and it is probable, that a ſmall diſtance will anſwer the purpoſe, if, at the ſame time, there be no ſtream of air to carry the effluvia of perſons, or goods, to ſome diſtance.

678. For thoſe who are neceſſarily obliged to have a near communication with the ſick, it is proper to let them know, that ſome of the moſt powerful contagions do not operate, but when the bodies of men expoſed to the contagion are in certain circumſtances which render them more liable to be affected by it, or when certain cauſes concur to excite the power of it; and therefore, by avoiding theſe circumſtances and cauſes, they may often eſcape infection.

679. The bodies of men are eſpecially liable to be affected by contagions,

when they are any ways conſiderably weakened by want of food, and even by a ſcanty diet, or one of little nouriſhment; by intemperance in drinking, which, when the ſtupor of intoxication is over, leaves the body in a weakened ſtate; by exceſs in venery; by great fatigue; or by any conſiderable evacuation.

680. The cauſes which, concurring with contagion, render it more certainly active, are cold, fear, and full living.

The ſeveral means, therefore, of avoiding or guarding againſt the action of cold (94. to 96.) are to be carefully ſtudied.

681. Againſt fear the mind is to be fortified as well as poſſible, by inſpiring a favourable idea of the power

of preſervative means; by deſtroying the opinion of the incurable nature of the diſeaſe; by occupying mens minds with buſineſs or labour; and by avoiding all objects of fear, as funerals, paſſing bells, and any notice of the death of particular friends.

682. A full diet of animal food increaſes the irritability of the body, and favours the operation of contagion; and indigeſtion, whether from the quantity or quality of food, has the ſame effect.

683. Beſides giving attention to obviate the ſeveral circumſtances (610, 679 to 682,) which favour the operation of contagion, it is probable that ſome means may be employed for ſtrengthening the bodies of men, and thereby ennabling them to reſiſt contagion.

For this purpoſe, it is probable, that the moderate uſe of wine, or of ſpirituous liquor, may have a good effect.

It is probable alſo, that exerciſe, when it can be employed, if ſo moderate as to be neither heating nor fatiguing to the body, may be employed with advantage.

Perſons who have tried cold bathing, and commonly feel invigorating effects from it, if they are any ways ſecure againſt having already received infection, may poſſibly be enabled to reſiſt it by the uſe of the cold bath.

It is probable, that ſome medicines alſo may be uſeful in enabling men to reſiſt infection: but amongſt theſe I can hardly admit the numerous alexipharmics formerly propoſed; or, at leaſt, very few of them, and thoſe only of tonic power. Amongſt theſe laſt we reckon the Peruvian bark; and it is perhaps the moſt effectual. If any thing is to be expected from antiſeptics, I think camphire, whether internally or externally employed, is one of the moſt promiſing.

Every perſon is to be indulged in the uſe of any means of preſervation of which he has conceived a good opinion, whether it be a charm or a medicine, if the latter be not directly hurtful.

Whether iſſues be uſeful in preſerving from, or in moderating the effects of, contagion, I cannot determine from the obſervations I have yet read.

684. As neither the atmoſphere in general, nor any conſiderable portion

of it, is tainted or impregnated with the matter of contagions; ſo the lighting of fires over a great part of the infected city, or other general fumigations in the open air, are of no uſe for preventing the diſeaſe, and may perhaps be hurtful.

685. It would probably contribute much to check the progreſs of infection, if the poor were injoined to make a frequent change of clothing, and were ſuitably provided for that purpoſe; and if they were, at the ſame time, induced to make a frequent ventilation of their houſes and furniture.

SECT. III.

OF THE

CURE

OF THE

PLAGUE.

686. IN the cure of the plague, the indications are the ſame as thoſe of fever in general, (526.); but here they are not all equally neceſſary and important.

687. The meaſures for moderating the violence of reaction, which operate by diminiſhing the action of the heart and arteries (528.) have ſeldom any place here, excepting ſo far as the antiphlogiſtic regimen is generally proper. Some phyſicians, indeed, have recommended bleeding; and there may occur caſes in which bleeding may be uſeful; but, for the moſt part, it is unneceſſary, and in many caſes it might be very hurtful.

Purging has alſo been recommended; and, in ſome degree, it may be uſeful in drawing off the bile, or other putreſcent matters frequently preſent in the inteſtines; but a large evacuation this way may certainly be hurtful.

688. The moderating the violence of reaction, ſo far as it can be done by

taking off the ſpaſm of the extreme veſſels (151,) is a meaſure of the utmoſt neceſſity in the cure of the plague and the whole of the whole means (152 to 200) ſuited to this indication are extremely proper.

689. The giving an emetic at the very firſt approach of the diſeaſe, would probably be of great ſervice; and it is likely, that at ſome other periods of the diſeaſe emetics might be uſeful, both by evacuating bile abundant in the alimentary canal, and by taking off the ſpaſm of the extreme veſſels.

690. From ſome principles with reſpect to fever in general, and with reſpect to the plague in particular, I am of opinion, that, after the exhibition of the firſt vomit, the body ſhould be diſpoſed to ſweat; which ought to be raiſed to a moderate degree only, but

continued for at leaſt twenty-four hours, or longer if the patient bear it eaſily.

691. This ſweating ſhould be excited and conducted agrreeably to the rules laid down in 168. It is to be promoted by the plentiful uſe of diluents, rendered more grateful by vegetable acids, or more powerful by being impregnated with ſome portion of neutral ſalts.

692. To ſupport the patient under the continuance of the ſweat, a little weak broth, acidulated with juice of lemons, may be given frequently; and ſometimes a little wine, if the heat of the body be not conſiderable.

693. If ſudorific medicines are judged to be neceſſary, opiates are the moſt

effectual and ſafe: but they ſhould not be combined with aromatics; and probably may be more effectual, if joined with a portion of emetics, and of neutral ſalts.

694. If notwithſtanding the uſe of emetics and ſudorifics, the diſeaſe ſhould ſtill continue, the cure muſt depend upon the employment of means for obviating debility and putreſcency; and, for this purpoſe, the various remedies propoſed above (from 201 to 227) may all be adminiſtered, but eſpecially the tonics; and of theſe the chief are cold drink and the Peruvian bark.

695. In the cure of the plague, ſome attention is due to the management of buboes and carbuncles: but we do

not touch this, as it belongs to the province of ſurgery *.

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* The reader might poſſibly expect a detail of the medicines uſed in the plague, with their doſes, and the manner of adminiſtering them; but I thought it better to refer to the authors who have either ſeen the diſeaſe, or who have expreſly written on it.

On conſulting different authors, it appears, that every particular epidemic requires a different treatment, in ſome part of the cure at leaſt. Should any young practitioner be unfortunate enough to have occaſion to exerciſe his art in the cure of the plague, he muſt chiefly be directed by the general indications of the cure of fevers.

CHAP. VI.

OF

ERYSIPELAS,

OR

ST. ANTHONY'S FIRE.

696. IN 274, I mentioned the diſtinction which I propoſed to make between the diſeaſes to be named the Erythema and the Eryſipelas; and from thence it will appear, that Eryſipelas, as

an Erythema following fever, may have its place here.

697. I ſuppoſe the eryſipelas to depend on a matter generated within the body, and which analogous to the other caſes of exanthemata, is, in conſequence of fever, thrown out upon the ſurface of the body. I own it may be difficult to apply this to every particular caſe of eryſipelas: but I take the caſe in which it is generally ſuppoſed to apply, that of the eryſipelas of the face; which I ſhall therefore conſider here.

698. The Eryſipelas of the face comes on with a cold ſhivering, and other ſymptoms of pyrexia. The hot ſtage of this is frequently attended with a confuſion of head, and ſome degree of delirium; and almoſt always with drowſineſs, or perhaps coma. The pulſe

is always frequent, and commonly full and hard.

699. When theſe ſymptoms have continued for one, two, or at moſt three days, there appears, on ſome part of the face, a redneſs, ſuch as that deſcribed in 275, as the appearance of Erythema. This redneſs, at firſt, is of no great extent; but gradually ſpreads from the part it firſt occupied to the other parts of the face, commonly till it ſpreads over the hairy ſcalp, or deſcends on ſome part of the neck. As the redneſs ſpreads, it commonly diſappears, or at leaſt decreaſes, in the parts it had before occupied. All the parts upon which the redneſs appears are at the ſame time, affected with ſome ſwelling, which continues for ſome time after the redneſs has abated. The whole face becomes conſiderably turgid;

gid; and the eye-lids are often ſo much ſwelled as entirely to ſhut up the eyes.

700. When the redneſs and ſwelling have proceeded for ſome time, there commonly ariſe, ſooner or later, bliſters of a larger or ſmaller ſize, on ſeveral parts of the face. Theſe contain a thin yellowiſh or almoſt colourleſs liquor, which ſooner or later runs out. The ſurface of the ſkin, in the bliſtered places, ſometimes becomes livid and blackiſh; but this livor ſeldom goes deeper than the ſurface, or diſcovers any degree of gangrene affecting the ſkin. On the parts of the ſurface not affected with bliſters, the cuticle ſuffers, towards the end of the diſeaſe, a conſiderable deſquamation.

Sometimes the tumour of the eye-lids ends in a ſuppuration.

701. The inflammation coming upon the face does not produce any remiſſion of the fever which had before prevailed; and ſometimes the fever increaſes with the increaſing and ſpreading inflammation.

702. The inflammation uſually continues for eight or ten days; and, for the ſame time, the fever and ſymptoms attending it alſo continue.

703. In the progreſs of the inflammation, the delirium and coma attending it ſometimes go on increaſing, and the patient dies apoplectic on the ſeventh, ninth, or eleventh day of the diſeaſe. In ſuch caſes it has been commonly ſuppoſed that the diſeaſe is tranſlated from the external to the internal parts. But I have not ſeen any inſtance in which it did not appear to me, that the affection of the brain was merely a communication

of the external affection, as this continued increaſing at the ſame time with the internal.

704. When the fatal event does not take place, the inflammation, after having affected a part, commonly the whole of the face, and perhaps the other external parts of the head, ceaſes. With the inflammation, the fever alſo ceaſes; and, without any evident criſis, the patient returns to his ordinary ſtate of health.

725. This diſeaſe is not commonly contagious; but as it may ariſe from an acrid matter externally applied, ſo it is poſſible that the diſeaſe may ſometimes be communicated from one perſon to another.

Perſons who have once laboured under this diſeaſe are liable to returns of it.

706. The event of this diſeaſe may be foreſeen from the ſtate of the ſymptoms which denote more or leſs affection of the brain. If neither delirium nor coma come on, the diſeaſe is ſeldom attended with any danger; but when theſe ſymptoms appear early in the diſeaſe, and are in a conſiderable degree, the utmoſt danger is to be apprehended.

707. As this diſeaſe often ariſes in the part, at the ſame time with the coming on of the pyrexia; as I have known it, with all its ſymptoms, ariſe from an acrimony applied to the part; as it is commonly attended with a full, and frequently a hard pulſe; as the blood drawn in this diſeaſe ſhows the ſame cruſt upon its ſurface, that appears in the phlegmaſiæ; and, laſtly, as the ſwelling of the eye-lids, in this diſeaſe, frequently ends in a ſuppuration; ſo, from theſe conſiderations, it ſeems doubtful if this diſeaſe

be properly, in Noſology, ſeparated from the Phlegmaſiæ. At any rate, I take the diſeaſe I have deſcribed to be what phyſicians have named the Eryſipelas Phlegmonodes, and that it partakes a great deal of the nature of the Phlegmaſiæ.

708. Upon this concluſion, the Eryſipelas of the face is to be cured very much in the ſame manner as phlegmonic inflammations, by blood-letting, cooling purgatives, and by employing every part of the antiphlogiſtic regimen;* and our experience has confirmed the fitneſs of this method of cure.

709. The evacuations of blood letting and purging, are to be employed more or leſs according to the urgency of ſymptoms, particularly thoſe of the pyrexia, and

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* The antiphlogiſtic regimen, &c. have been deſcribed in former notes. See art. 129, *et ſeq.*

and of thoſe which mark an affection of the brain. As the pyrexia continues, and often increaſes with the inflammation of the face; ſo the evacuations mentioned may be employed at any time in the courſe of the diſeaſe.

710. In this, as in other diſeaſes of the head, it is proper to put the patient, as often as he can eaſily bear it, into ſomewhat of an erect poſture.

711. As in this diſeaſe there is always an external affection, and as in many inſtances there is no other; ſo various external applications to the part affected have been propoſed; but almoſt all of them are of doubtful effect. The narcotic*, refrigerant, and aſtringent

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* The leaves of ſolanum, of hemlock, of henbane, and other ſimilar plants applied as fomentations.

ſtringent * applications, are ſuſpected of diſpoſing to gangrene; ſpirituous † applications ſeem to increaſe the inflammation, and all oily or watery ‡ applications ſeem to occaſion its ſpreading. The application that ſeems moſt ſafe, and which is now moſt commonly employed, is that of a dry mealy powder frequently ſprinkled upon the inflamed parts §.

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[*] Solutions of Saccharum Saturni, or Vitriolum album, applied cold.

[†] Eſpecially if they are ſuch as are compounded with aromatics or volatile ſalts, as camphorated ſpirit of wine, Hungary water, volatile liniment, &c.

[‡] The reaſon is evident becauſe they confine the acrimonious liquor diſcharged from the part affected.

[§] Wheat-flour is apt to run into hard lumps by the thin acrimonious liquor which always exhales from parts affec-

712. An Eryſipelas Phlegmonodes frequently appears on other parts of the body, beſide the face; and ſuch other eryſipelatous inflammations frequently end in ſuppuration. Theſe caſes are ſeldom dangerous. At coming on, they are ſometimes attended with drowſineſs, and even with ſome delirium; but this rarely happens; and theſe ſymptoms do not continue after the inflammation is formed. I have never ſeen an inſtance of the tranſlation of this inflammation from the

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ted with eryſipelas. Oatmeal not being ſo liable to this inconvenience is therefore preferable: it ought to be wiped off, and a freſh quantity applied twice or thrice a day.

Many practitioners recommend the application of cabbage leaves to eryſipelatous ſwellings, and their efficacy has been frequently approved. They ought to be removed as ſoon as they grow warm or uneaſy, and freſh cold ones applied.

the limbs to an internal part; and though theſe inflammations of the limbs be attended with pyrexia, they ſeldom require the ſame evacuations as the eryſipelas of the face. At firſt they are to be treated by dry mealy applications only; and all humid applications, as fomentations, or poultices, are not to be applied, till, by the continuance of the diſeaſe, by the increaſe of ſwelling, or by a throbbing felt in the part, it appears that the diſeaſe is proceeding to ſuppuration.

713. We have hitherto conſidered eryſipelas as in a great meaſure of a phlegmonic nature; and, agreeably to that opinion, we have propoſed our method of cure. But it is probable, that an eryſipelas is ſometimes attended with, or is a ſymptom of, a putrid fever; and, in ſuch caſes, the evacuations propoſed a-

bove, may be improper, and the uſe of the Peruvian bark may be neceſſary; but I cannot be explicit upon this ſubject, as ſuch putrid caſes have not come under my obſervation.

CHAP. VII.

OF THE

MILIARY FEVER.

714. THIS diſeaſe is ſaid to have been unknown to the ancients, and that it appeared for the firſt time, in Saxony, about the middle of the laſt century*. It is ſaid to have ſpread from thence

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* Hoffman, Welſch, and ſeveral other writers, fix the firſt appearance of this diſeaſe at Leipſic in the years 1651 and 1652. This opinion, however, is falſe; for deſcriptions of miliary eruptions are to be found in the writings of the antients, and among the moderns we

thence into all the other parts of Europe[*]; and, ſince the period mentioned, to have appeared in many countries in which it had never appeared before.

715. The

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we find Riverius deſcribing it in France, juſt after the appearance of the comet of the year 1618; to which phenomenon that author aſcribes the fatal epidemic, as well as the bloody wars that were at that time making horrid devaſtations in Europe.

[*] We meet with ſeveral accounts of the appearance of the miliary eruption in different parts of Europe ſoon after the middle of the laſt century, not only by medical writers, but by general hiſtorians; among the latter of whom we may mention Robert Sibbald, who takes notice of it in his *Scotia illuſtrata*, publiſhed at Edinburgh in the year 1684. (Sibbald, however, was a phyſician.) To enumerate the medical writers who have deſcribed the diſeaſe in the different parts of Europe, would take more room than the ſhort compaſs of theſe notes admits, the chief of them are Welſch, Hoffman, Langius, Reyger, Bonetus, Grinwald, Sydenham, Ramazini, Fuchſius, &c. &c.

The authors above mentioned, and ſeveral others about the end of the laſt and beginning of this century, entertained

715. From the time of its having been firſt particularly obſerved, it has been deſcribed and treated of by many different writers; and by all of them, till very lately, has been conſidered as a peculiar idiopathic diſeaſe.

It is ſaid to have been conſtantly attended with peculiar ſymptoms. It comes on with a cold ſtage, which is often conſiderable. The hot ſtage, which ſucceeds, is attended with great anxiety, and frequent ſighing. The heat of the body becomes great,

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tained various opinions concerning the nature of the miliary eruption, ſome of them ſuppoſing it to be a critical termination of a peculiar fever, and others on the contrary ſtrenuouſly inſiſting that it was only accidental or ſymptomatic, and never critical or ſalutary. The controverſy, which was carried on with ſome warmth, is now terminated, as will appear by what follows; but the inquiſitive young phyſician will find both entertainment and inſtruction in peruſing it. A very good abſtract of it occurs in De Haen's treatiſe on the diviſion of Fevers.

great, and ſoon produces profuſe ſweating; preceded, however, by a ſenſe of pricking, as of pin-points, in the ſkin; and the ſweat is of a peculiarly rank and diſagreeable odour. The eruption appears ſooner or later in different perſons, but at no determined period of the diſeaſe. It ſeldom or never appears on the face; but diſcovers itſelf firſt upon the neck and breaſt, and from thence often ſpreads over the whole body.

716. The eruption named Miliary is ſaid to be of two kinds, the one named the Red, the other the White Miliary. The former, which in Engliſh is ſtrictly named a Raſh, is commonly allowed to be a ſymptomatic affection; and as the latter is the only one that has any pretentions to be conſidered as an idiopathic diſeaſe, it is this alone that I ſhall more particularly deſcribe and treat of in the preſent chapter.

717. What then is called the White Miliary eruption, appears at firſt like the red, in very ſmall red pimples, for the moſt part diſtinct, but ſometimes cluſtered together. Their ſlight prominence is diſtinguiſhed better by the finger than by the eye. Soon after the appearance of this eruption, and at leaſt on the ſecond day, a ſmall veſicle appears upon the top of each pimple. At firſt the veſicle is whey-coloured; but ſoon becomes white, and ſtands out like a little globule on the top of the pimple. In two or three days, theſe globules break, or are rubbed off; and are ſucceeded by ſmall cruſts, which ſoon after fall off in ſmall ſcales. While one ſet of pimples takes this courſe, another ſet ſucceeds; ſo that the diſeaſe often continues upon the ſkin for many days together. Sometimes when one crop of this eruption has diſappeared, another, after ſome interval,

is produced. And it has been further obſerved, that in ſome perſons there is ſuch a tendency to this diſeaſe, that they have been affected with it ſeveral times in the courſe of their lives.

718. This diſeaſe is ſaid to affect both ſexes, and perſons of all ages and conſtitutions; but it has been obſerved, at all times, to affect eſpecially, and moſt frequently, lying-in women.

719. This diſeaſe is often accompanied with violent ſymptoms and has frequently proved fatal. The ſymptoms, attending it are, however, very various. They are, in one or other inſtance, all the ſeveral ſymptoms attending febrile diſeaſes; but I cannot find that any ſymptom or concourſe of ſymptoms are ſteadily the ſame in different perſons, ſo as furniſh any ſpecific character to the diſeaſe. When the diſeaſe is violent, the

moſt common ſymptoms are phrenitic, comatoſe, and convulſive affections, which are alſo ſymptoms of all fevers treated by a warm regimen.

720. While there is ſuch a variety of ſymptoms appearing in this diſeaſe, it is not to be expected that any one particular method of cure can be propoſed: and accordingly we find, in different writers, different methods and remedies preſcribed; frequent diſputes about the moſt proper; and thoſe received and practiſed by ſome, oppoſed and rejected by others.

721. I have thus given an account of what I have found delivered by authors who have conſidered the white miliary fever as an idiopathic diſeaſe: but, now, after having often obſerved the diſeaſe, I muſt ſay that I doubt much if it ever be ſuch an idiopathic as has been ſup-

poſed, and I ſuſpect that there is much fallacy in what has been written on the ſubject.

722. It ſeems to me very improbable, that this ſhould have been really a new diſeaſe when it was firſt conſidered as ſuch. There appear to me very clear traces of it in authors who wrote long before that period; and, though there were not, we know that the deſcriptions of the antients were inaccurate and imperfect, particularly with reſpect to cutaneous affections; whilſt we know alſo very well, that thoſe affections which uſually appeared as ſymptomatic only, were commonly neglected, or confounded together under a general appellation.

723. The antecedent ſymptoms of anxiety, ſighing, and pricking of the ſkin, which have been ſpoken of as peculiar to this diſeaſe, are, however, common

to many others; and, perhaps to all thoſe in which ſweatings are forced out by a warm regimen.

Of the ſymptoms ſaid to be concomitant of this eruption, there are none which can be ſaid to be conſtant and peculiar but that of ſweating. This, indeed, always precedes and accompanies the eruption; and, while the miliary eruption attends many different diſeaſes, it never, however, appears in any of theſe, but after ſweating; and, in perſons labouring under theſe diſeaſes, it does not appear, if ſweating be avoided. It is therefore probable, that the eruption is the effect of ſweating; and that it is the produce of a matter, not before prevailing in the maſs of blood, but generated, under particular circumſtances, in the ſkin itſelf. That it depends upon particular circumſtances of the ſkin, appears further from hence, that the eruption ſeldom or never appears upon the face, although it affects the whole of the body beſides; that it comes upon thoſe places eſpecially which are more cloſely covered; and that it can be brought out upon particular parts by external applications.

724. It is to be obſerved, that this eruptive diſeaſe differs from the other exanthemata in many circumſtances; in its not being contagious, and therefore never epidemic; that the eruption appears at no determined period of the diſeaſe; that the eruption has no determined duration; that ſucceſſive eruptions frequently appear in the courſe of the ſame fever; and that ſuch eruptions frequently recur in the courſe of the ſame perſon's life.

All theſe circumſtances render it extremely probable, that, in the miliary fever, the morbific matter is not a ſubſiſting contagion communicated to the blood, and thence, in conſequence of fever and aſſimilation, thrown out upon the ſurface of the body; but a matter occaſionally produced in the ſkin itſelf, by ſweating.

725. This concluſion is further rendered probable from hence, that, while the miliary eruption has no peculiar ſymptoms, or concourſe of ſymptoms, belonging to it; yet, upon occaſion, it accompanies almoſt all febrile diſeaſes, whether inflammatory or putrid, if theſe happen to be attended with ſweating; and from thence it may be preſumed, that the miliary eruption is a ſymptomatic affection only, produced in the manner we have ſaid.

726. But, as this ſymptomatic affection does not always accompany every inſtance of ſweating, it may be proper to inquire, what are the circumſtances

which eſpecially determine this eruption to appear? To this, however, I can give no full and proper anſwer. I cannot ſay that there is any one circumſtance which in all caſes gives occaſion to the eruption; nor can I ſay what different cauſes may, in different caſes, give occaſion to it. There is only one obſervation I can offer to the purpoſe of this inquiry; and it is, that, of the perſons ſweating under febrile diſeaſes, thoſe are eſpecially liable to the miliary eruption, who have been previouſly weakened by large evacuations, particularly of blood. This will explain why it happens to lying-in women more frequently than to any other perſons; and to confirm this explanation, I have remarked, that the eruption happened to women not in childbed, but who had been much ſubjected to a frequent and copious menſtruation, and to an almoſt conſtant fluor albus. I have alſo had occaſion to obſerve it happen to men in fevers, after wounds from which they had ſuffered a great loſs of blood.

Further, that this eruption is produced by a certain ſtate of debility, will appear probable, from its often occurring in fevers of the putrid kind, which are always attended with great debility. It is true, that it alſo ſometimes attends inflammatory diſeaſes, when it cannot be accounted for in the ſame manner; but I believe it will be found to attend eſpecially thoſe inflammatory diſeaſes in which the ſweats have been long protracted or frequently repeated, and which have thereby produced a debility, and perhaps a debilitating putrid diatheſis.

727. It appears ſo clearly to me that this eruption is always a ſymptomatic* and

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* As this diſeaſe is always ſymptomatic and never idiopathic, the method of curing muſt neceſſarily vary in different

and factitious affection, that I am perſuaded it may be in moſt caſes prevented merely by avoiding ſweats. Spontaneous ſweatings, in the beginning of diſeaſes, are very rarely critical; all ſweatings, not evidently critical, ſhould be prevented; and the promoting them, by increaſing external heat, is commonly very pernicious. Even critical ſweats ſhould hardly be encouraged by ſuch means. If, therefore, ſpon-

different caſes; the chief attention of the phyſician muſt therefore be turned to the primary diſeaſe, and to the means of preventing this ſymptom from appearing in thoſe diſeaſes which it accompanies.

The author judiciouſly begins his method of cure by giving directions for preventing the eruption, which he properly ſuppoſes to be entirely factitious, and to depend on the application of too much heat. With a proper attention to the directions given in the text, we may in general prevent the eruption. If, however, the eruption is preſent before the phyſician is called, thoſe remedies muſt be uſed for its removal, that are enumerated in the ſubſequent articles.

ſpontaneous ſweats ariſe, they are to be checked by the coolneſs of the chamber; by the lightneſs and looſeneſs of the bed clothes; by the perſons laying out their hands and arms, and by their taking cold drink; and, by theſe precautions, I think I have frequently prevented miliary eruptions, which were otherwiſe likely to have appeared, particularly in lying-in women.

728. But it may happen, when theſe precautions have been neglected, or from other circumſtances, that a miliary eruption does actually appear; and the queſtion will be then put, how the caſe is to be treated? It is a queſtion of conſequence, becauſe I believe that the matter here generated is often of a virulent kind; it is frequently the offspring of putreſcency; and, when treated by increaſing the external heat of the body, it ſeems to acquire a virulence which

produces thoſe ſymptoms mentioned in 719, and proves certainly fatal.

It has been an unhappy opinion with moſt phyſicians, that eruptive diſeaſes were ready to be hurt by cold; and that it was neceſſary, therefore to cover up the body very cloſely, ſo as thereby to increaſe the external heat. We now know that this is a miſtaken opinion; that increaſing the external heat of the body is very generally miſchievous; and that ſeveral eruptions not only admit, but require the application of cold air. We are now * perſuaded, that the practice

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* The preſent rational practice has entirely altered the regimen in fevers; and inſtead of macerating the patient in a hot bed, and obliging him to breathe the corrupt air of a confined chamber, we now cover him with light bed clothes, and ventilate his room.

It may, however, be neceſſary to guard the young phyſician againſt the exceſs of this practice. The precept, *Omne* practice which formerly prevailed, in the caſe of miliary eruptions, of covering up the body cloſe, and both by external means, and internal remedies, encouraging the ſweatings which accompany this eruption, was highly pernicious, and commonly fatal. I am therefore of opinion, even when a miliary eruption has appeared, that in all

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Omne nimium nocet, ſhould always be attended to. If the patient feels any diſagreeable effects, or if he ſhould ſuffer rigors, or trembles from the admiſſion of cold air, it is certainly prejudicial, and its admiſſion ought to be regulated.

It may not be improper to mention another caution, viz. That the young practitioner muſt not, by the means here recommended, check ſweats that are really critical. To determine what ſweats are, and what are not, critical, is perhaps, in ſome caſes, attended with conſiderable difficulty. In general, however, critical ſweats may be known by their happening on the critical days before mentioned in articles 107, *et ſeq.* and by their always being immediately followed by an abatement of all, or at leaſt the greateſt part of the ſymptoms.

caſes where the ſweating is not manifeſtly critical, we ſhould employ all the ſeveral means of ſtopping it that are mentioned above; and I have ſometimes had occaſion to obſerve, that even the admiſſion of cool air was ſafe and uſeful.

729. This is, in general, the treatment of miliary eruptions: but at the ſame time, the remedies ſuited to the primary diſeaſe are to be employed; and therefore, when the eruption happens to accompany inflammatory affections, and when the fulneſs and hardneſs of the pulſe or other ſymptoms ſhow an inflammatory ſtate preſent, the caſe is to be treated by bloodletting, purging, and other antiphlogiſtic remedies.

Upon the other hand, when the miliary eruption attends diſeaſes in which debility and putreſcency prevail, it will be proper to avoid all evacuations, and employ tonic and antiſeptic remedies, particularly the Peruvian bark, cold drink, and cold air.

I ſhall conclude this ſubject with mentioning, that the venerable octogenarian practitioner, de Fiſcher, when treating of this ſubject, in laying down the indications of cure, has given this as one of them: "Excretionis peri-"phericæ non primariam habere ratio-"nem."

CHAP. VIII.

OF THE

REMAINING EXANTHEMATA.

URTICARIA, PEMPHIGUS, AND APHTHA.

730. THE Nettle Raſh is a name applied to two different diſeaſes. The one is the chronic eruption deſcribed by Dr Heberden in the Medical Tranſactions, Vol. I. art. xvii. which, as not being a febrile diſorder, does not belong to this place. The other is the Urticaria of our Synopſis,

which, as taken into every ſyſtem of Noſology as one of the Exanthemata Febrilia, is properly to be treated of here.

731. I have never obſerved this diſeaſe as contagious and epidemic: and the few ſporadic caſes of it which have occured to me, have ſeldom taken the regular courſe deſcribed by authors. At the ſame time, as the accounts of different authors are not very uniform, and hardly conſiſtent, I cannot enter further into the conſideration of this ſubject; and I hope it is not very neceſſary, as on all hands it is agreed to be a mild diſeaſe, and ſuch as ſeldom requires the uſe of remedies. It is generally ſufficient to obſerve an antiphlogiſtic regimen, and to keep the patient in a temperature that is neither hot nor cold.

732. The Pemphigus or Veſicular fever, is a rare and uncommon diſeaſe,

and very few inſtances of it are recorded in the writings of phyſicians. As I have never had occaſion to ſee it, it would be improper for me to treat of it *; and I do not chooſe to repeat after others, while the diſeaſe has yet been little obſerved, and its character does not ſeem to be exactly aſcertained. Vid. Acta Helvetica, vol. ii. p. 260. Synopſ. Noſolog. vol. ii. p. 149.

733. The Aphtha, or Thruſh, is a diſeaſe better known; and, as it commonly appears

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* It appears from the following paſſage in the author's Synopſis, that he had afterwards ſeen it: "Collega noſter eximius Franciſcus Home, mihi hominem leviter febricitantem oſtendit, cui, primum in brachiis, et ſucceſſive demum in toto corpore, veſiculæ magnitudine avellanæ obortæ ſunt, et poſt duos treſve dies effuſo humoris ſeroſi pauxillo, collapſæ ſunt. Hæc febris autem nullam indolem vel typum peculiarem monſtrabat, et cito diſparuit nequaquam contagioſa."

appears in infants, it is ſo well underſtood, as not to need our treating of it here. As an idiopathic diſeaſe, affecting adults, I have not ſeen it in this country: but it ſeems to be more frequent in Holland; and, therefore, for the ſtudy of it, I refer to Dr Boerhaave, and his commentator Van Swieten, whoſe works are in every body's hands *.

734. The Petechia has been, by all our Noſologiſts, enumerated amongſt the

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* Boerhaave only ſaw aphthæ twice without, and preceding, fever, and Van Swieten only once; but Ketelaer ſays he has frequently ſeen them. They ſometimes accompany inflammations of the viſcera, and other inflammatory fevers, and are often difficult to remove. They are to be treated in the ſame manner as the ulcerations in the Cynanche maligna, by gargles of the deterſive kind, until the aphthous cruſt ſeparates and falls off; but

the exanthemata ; but as, according to the opinion of moſt phyſicians, it is very juſtly held to be always a ſymptomatic affection only, I cannot give it a place here.

BOOK

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but when that cruſt has fallen off, the painfulneſs of the nakedly expoſed ſenſible parts requires emollient applications; of which kind a decoction of Rad. Alth. or an infuſion of lintſeed, are proper gargles alone: if honey be added, the patient complains of its making the parts ſmart. The patient's diet ought to be of the mildeſt kind, that it may be ſwallowed without cauſing much pain.

The aphthous cruſt frequently appears at the anus, which ſymptom generally leads us to conclude, as is really the caſe, that aphthæ covers the whole inteſtinal canal. Hence conſiderable danger ariſes. The abſorbents are covered, and refuſe admittance to all nouriſhment; hence an increaſed debility, with all its evil conſequences. In theſe caſes, a nutritive, liquid, and deterſive diet, muſt be uſed. For this purpoſe a decoction of bread, with wine and honey, is the propereſt drink. Such a decoction is extremely nutritive, and alſo averſe to putrifaction, and therefore well adapted to the exigency of the caſe.

BOOK IV.

OF

HEMORRHAGIES.

CHAP. I.

OF

HEMORRHAGY IN GENERAL.

735. IN eſtabliſhing a claſs or order of diſeaſes under the title of *Hemorrhagies*, Noſologiſts have employed

the ſingle circumſtance of an effuſion of red blood, as the character of ſuch a claſs or order. By this means they have aſſociated diſeaſes which in their nature are very different ; but, in every methodical diſtribution, ſuch arbitrary and unnatural aſſociations ſhould be avoided as much as poſſible. Further, by that management Noſologiſts have ſuppreſſed or loſt ſight of an eſtabliſhed and well-founded diſtinction of hemorrhagies into Active and Paſſive.

736. It is my deſign to reſtore this diſtinction ; and I ſhall therefore here, under the title of Hemorrhagies, comprehend thoſe only which have been commonly called Active, that is, thoſe attended with ſome degree of pyrexia ; which ſeem always to depend upon an increaſed impetus of the blood in the veſſels pouring it out, and which

chiefly ariſe from an internal cauſe. In this I follow Dr Hoffman, who joins the active hemorrhagies with the febrile diſeaſes; and have accordingly eſtabliſhed theſe hemorrhagies as an order in the claſs of Pyrexiæ. From this order I exclude all thoſe effuſions of red blood that are owing entirely to external violence; and all thoſe which, though ariſing from internal cauſes, are, however, not attended with pyrexia, and which ſeem to be owing to a putrid fluidity of the blood, and to the weakneſs or to the eroſion of the veſſels, rather than to any increaſed impetus of the blood in them.

737. Before proceeding to treat of thoſe proper hemorrhagies which form an order in our Noſology, I ſhall treat of active hemorrhagy in general; and in-

deed the ſeveral genera and ſpecies, to be treated of particularly afterwards, have ſo many circumſtances in common with one another, that the general conſideration to be now offered will prove both proper and uſeful.

SECT. II.

OF THE PHENOMENA OF HEMORRHAGY.

738. The phenomena of hemorrhagy are generally the following.

Hemorrhagies happen eſpecially in plethoric habits, and to perſons of a ſanguine temperament. They appear moſt commonly in the ſpring, or in the beginning of ſummer.

For ſome time, longer or ſhorter in different caſes, before the blood flows, there are ſome ſymptoms of fulneſs and tenſion about the parts from from whence the blood is to iſſue. In ſuch parts as fall under our view, there are ſome redneſs, ſwelling, and ſenſe of heat or of itching; and in the internal parts, from which blood is to flow, there is a ſenſe of weight and heat; and, in both caſes, various pains are often felt in the neighbouring parts.

739. When theſe ſymptoms have ſubſiſted for ſome time, ſome degree of a cold ſtage of pyrexia comes on, and a hot ſtage is formed; during which the blood flows of a florid colour, in a greater or leſſer quantity, and continues to flow for a longer or ſhorter time; but commonly, after ſome time, the effuſion

ſpontaneouſly ceaſes, and together with it the pyrexia alſo.

740. During the hot ſtage which precedes an hemorrhagy, the pulſe is frequent, quick*, full, and often hard; but, as the blood flows, the pulſe becomes ſofter and leſs frequent.

741. In hemorrhagies, blood drawn from a vein, does, upon its concreting, commonly ſhow the gluten ſeparated, or a cruſt formed, as in the caſes of Phlegmaſiæ.

742. Hemorrhagies, from internal cauſes, having once happened, are apt, after a certain interval, to return; in ſome caſes

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* The difference between a frequent and quick pulſe was mentioned in a note on article 336.

caſes very often, and frequently at ſtated periods.

743. Theſe are, in general, the phenomena of hemorrhagy; and if in ſome caſes all of them be not exquiſitely marked, or if perhaps ſome of them do not at all appear, it imports only, that, in different caſes, the ſyſtem is more or leſs generally affected; and that, in ſome caſes, there are purely topical hemorrhagies, as there are purely topical inflammations.

SECT. II.

OF THE PROXIMATE CAUSE OF HEMORRHAGY.

744. THE pathology of hemorrhagy ſeems to be ſufficiently obvious. Some inequality in the diſtribution of the blood, occaſions a congeſtion in particular parts of the ſanguiferous ſyſtem; that is, a greater quantity of blood is poured into

certain veſſels than their natural capacity is ſuited to receive. Theſe veſſels become, thereby, preternaturally diſtended; and this diſtenſion, proving a ſtimulus to them, excites their action to a greater degree than uſual, which puſhing the the blood with unuſual force into the extremities of thoſe veſſels, opens them by anaſtomoſis, or rupture; and, if theſe extremities be looſely ſituated on external ſurfaces, or on the internal ſurfaces of certain cavities that open outwardly, a quantity of blood flows out of the body.

745. This reaſoning will, in ſome meaſure, explain the production of hemorrhagy. But it appears to me, that, in moſt caſes, there are ſome other circumſtances that concur to produce it: for it is probable, that in conſequence of congeſtion, a ſenſe of reſiſtance ariſes, and excites the action of the Vis Medicatrix

Naturæ; the exertions of which are uſually made by the formation of a cold ſtage of pyrexia, inducing a more vigorous action of the veſſels; and the concurrence of this exertion more effectually opens the extremities, and occaſions the flowing out of the blood.

746. What has been delivered in the two preceeding paragraphs, ſeems to explain the whole phenomena of hemorrhagy, except the circumſtance of its frequent recurrence, which I apprehend may be explained in the following manner. The congeſtion and conſequent irritation being taken off by the flowing of the blood; this, therefore, ſoon after, ſpontaneouſly ceaſes; but, at the ſame time, the internal cauſes which had before produced the unequal diſtribution of the blood, commonly remain, and muſt now operate the more readily, as the over-ſtretched and relaxed

ed veſſels of the part will more eaſily admit of congeſtion of blood in them, and, conſequently, produce the ſame ſeries of phenomena as before.

747. This may ſufficiently explain the ordinary return of hemorrhagy: but there is ſtill another circumſtance, which, as commonly concurring, is to be taken notice of; and that is, the general plethoric ſtate of the ſyſtem, which renders every cauſe of unequal diſtribution of more conſiderable effect. Though hemorrhagy may often depend upon the ſtate of the veſſels of a particular part being favourable to a congeſtion's being formed in them; yet, in order to that ſtate's producing its effect, it is neceſſary that the whole ſyſtem ſhould be at leaſt in its natural plethoric condition; and, if this ſhould be in any degree increaſed beyond what is natural, it will ſtill more certainly determine the effects of topical

conformation to take place. The return of hemorrhagy, therefore, will be more certainly occaſioned, if the ſyſtem becomes preternaturally plethoric; but hemorrhagy has always a tendency to increaſe the plethoric ſtate of the ſyſtem, and, conſequently, to occaſion its own return.

748. To ſhow that hemorrhagy does contribute to produce or increaſe the plethoric ſtate of the ſyſtem, it is only neceſſary to obſerve, that the quantity of ſerous fluids being given, the ſtate of the excretions depends upon a certain balance between the force of the larger arteries propelling the blood, and the reſiſtance of the excretories: but the force of the arteries depends upon their fulneſs and diſtenſion, chiefly given to them by the quantity of red globules and gluten, which are, for the greateſt part, confined to the red arteries; and therefore, the

ſpoliation made by an hemorrhagy, being chiefly of red globules and gluten, the effuſion of blood muſt leave the red arteries more empty and weak. In conſequence of the weaker action of the red arteries, the excretions are in proportion diminiſhed; and, therefore, the ingeſta continuing the ſame, more fluids will be accumulated in the larger veſſels. It is by this means that the loſs of blood by hemorrhagies, whether artificial or ſpontaneous, if within certain bounds, is commonly ſo ſoon recovered: but as the diminution of the excretions, from a leſs quantity of fluid being impelled into the excretories, gives occaſion to theſe veſſels to fall into a contracted ſtate; ſo, if this ſhall continue long, theſe veſſels will become more rigid, and will not yield to the ſame impelling force as before. Although the arteries, therefore, by new blood collected in them, ſhall have recovered their former fulneſs, tenſion, and force, yet this force will not be in balance with the reſiſtance of the more rigid excretories, ſo as to reſtore the former ſtate of excretion; and, conſequently, a further accumulation will take place in the arteries, and an increaſe of their plethoric ſtate be thereby induced. In this manner, we perceive more clearly, that hemorrhagy, as producing a more plethoric ſtate of the ſyſtem, has a tendency to occaſion its own recurrence with greater violence; and, as the renewal and further accumulation of blood require a determinate time, ſo, in the ſeveral repetitions of hemorrhagy, that time will be nearly the ſame; and therefore the returns of hemorrhagy will be commonly at ſtated periods, as has been obſerved frequently to happen.

749. I have thus explained the nature of hemorrhagy in general, as depending upon ſome inequality in the diſtribution of the blood, occaſioning a congeſtion of it

in particular parts of the ſanguiferous ſyſtem. It is indeed probable, that, in moſt perſons, the ſeveral parts of the ſanguiferous ſyſtem are in balance with one another; and that the denſity, and conſequently the reſiſtance, in the ſeveral veſſels, is in proportion to the quantity of blood which each ſhould receive; from whence it frequently happens, that no inequality in the diſtribution of the blood takes place in the courſe of a long life. If, however, we conſider that the ſanguiferous ſyſtem is conſtantly in a plethoric ſtate, that is, that the veſſels are conſtantly diſtended beyond that ſize which they would be of, if free from any diſtending force, we ſhall be ſatisfied that this ſtate may be readily changed. For as, on the one hand, the veſſels are elaſtic, ſo as to be under a conſtant tendency to contract upon the withdrawing of any part of the diſtending force; and, on the other hand, are not ſo rigid but that, by an increaſe of the impetus of the blood in them, they may be more than ordinarily diſtended; ſo we can eaſily underſtand how, in moſt perſons, cauſes of an increaſed contraction or diſtenſion may ariſe in one part or other of the ſyſtem, or that an unequal diſtribution may take place; and how, in an exquiſitely diſtended or plethoric ſyſtem, a ſmall inequality in the diſtribution of the blood may form thoſe congeſtions which give occaſion to hemorrhagy.

750. In this manner I endeavour to explain how hemorrhagy may be occaſioned at any period of life, or in any part of the body: but hemorrhagies happen in certain parts more frequently than in others, and at certain periods of life more readily than at others; and therefore, in delivering the general doctrine of hemorrhagy, it may be required that I ſhould explain thoſe cir-

cumſtances which produce the ſpecialities mentioned; and I ſhall now attempt it.

751. The human body, from being of a ſmall bulk at its firſt formation, grows afterwards to a conſiderable ſize. This increaſe of bulk conſiſts, in a great meaſure, in the increaſe of the quantity of fluids, and a proportional enlargement of the containing veſſels. But, at the ſame time, the quantity of ſolid matter is alſo gradually increaſed; and, in whatever manner we may ſuppoſe this to be done, it is probable that the progreſs, in the whole of the growth of animal bodies, depends upon the extenſion of the arterial ſyſtem; and ſuch is the conſtitution of the ſanguiferous ſyſtem, that the motion of the blood in the arteries has a conſtant tendency to extend them in every dimenſion.

752. As the ſtate of the animal ſolid is, at the firſt formation of the body, very lax

and yielding; ſo the extenſion of the ſyſtem proceeds, at firſt, very faſt: but, as the extenſion gives occaſion to the appoſition of more matter to the ſolid parts, theſe are, in proportion to their extenſion, conſtantly acquiring a greater denſity, and therefore giving more reſiſtance to their further extenſion and growth. Accordingly, we obſerve, that as the growth of the body advances, its increaſe in any given time becomes proportionally leſs and leſs, till at length it ceaſes altogether.

753. This is the general idea of the growth of the human body, till it attain the utmoſt bulk which it is capable of acquiring; but, it is to be remarked, that this growth does not proceed equally in every part of the body, it being requiſite for the œconomy of the ſyſtem, that certain parts ſhould be firſt evolved, and ſhould alſo acquire their full bulk ſooner than others. This appears particularly

with reſpect to the head, the parts of which appear to be firſt evolved, and ſooneſt to acquire their full ſize.

754. To favour this unequal growth, it is preſumed, that the dimenſions or the laxity of the veſſels of the head, or that the direction of the force of the blood, are adapted to the purpoſe; and from what has been ſaid in 752, it will alſo certainly follow, that as the veſſels of the head grow faſteſt, and ſooneſt acquire their full ſize, ſo they will ſooneſt alſo acquire that denſity which will prevent their further extenſion. While, however, the force of the heart, and the quantity of the fluids, with reſpect to the whole ſyſtem, remain the ſame, the diſtending and extending powers will be directed to ſuch parts as have not yet acquired the ſame denſity and dimenſions as thoſe firſt evolved; and thus the diſtending and extending powers will proceed to operate till every part of the ſyſtem,

tem, in reſpect of denſity and reſiſtance, ſhall have been brought to be in balance with every other, and till the whole be in balance with the force of the heart, ſo that there can be no further growth in any particular part, unleſs ſome preternatural circumſtance ſhall happen to ariſe.

755. In this proceſs of the growth of the body, as it ſeems in general to depend upon a certain balance between the force of the heart, or diſtending power, and the reſiſtance of the ſolids; ſo it will appear, that, while the ſolids remain very lax and yielding, ſome occaſional increaſe of the diſtending power may ariſe without producing any very perceptible diſorder in the ſyſtem. But, it will alſo appear, that, in proportion as the diſtending power and reſiſtance of the ſolids come to be more nearly in exact balance with one another, ſo any increaſe of the diſtending power will

more readily produce a rupture of veſſels, which do not eaſily yield to extenſion.

756. From all this, it muſt follow, that the effects of any unuſually plethoric ſtate of the ſyſtem, will be different according as this ſhall occur at different periods of the growth of the body. Accordingly, it is evident, that if the plethoric ſtate ariſes while the head is yet growing, and while the determination of the blood is ſtill more to the head than to the other parts, the increaſed quantity of the blood will be eſpecially determined to the head; and as there alſo, at the ſame time, the balance between the diſtending and extending powers is moſt nearly adjuſted, ſo the determination of the blood will moſt readily produce in that part a rupture of the veſſels, or an hemorrhagy. Hence it is, that hemorrhagies of the noſe ſo frequently happen in young perſons; and in theſe more readily, as they approach nearer

to their acme, or full growth; or it may be ſaid, perhaps more properly, as they approach nearer to the age of puberty, when, perhaps, in both ſexes, but eſpecially in the female, a new determination ariſes in the ſyſtem.

757. The determination of a greater quantity of blood to the veſſels of the head, might be ſuppoſed to occaſion a rupture of veſſels in other parts of the head, as well as in the noſe: but ſuch a rupture does not commonly happen; becauſe in the noſe, there is, for the purpoſe of ſenſe, a conſiderable net-work of blood veſſels expanded on the internal ſurface of the noſtrils, and covered only with thin and weak teguments. From this circumſtance it is, that upon any increaſed impetus of the blood in the veſſels of the head, thoſe of the noſe are moſt eaſily broken; and the effuſion from the noſe taking place, it not only relieves the other extremities of the external carotid,

tid, to which the arteries of the noſe chiefly belong, but relieves alſo, in a great meaſure, the ſyſtem of the internal carotid. For, from the internal carotid, certain branches are ſent to the noſe, or ſpread out on its internal ſurface, and probably inoſculated with the extremities of the external carotid: ſo that, whichſoever of the extremities are broken, the *vis derivationis* of Haller will take place; the effuſion will relieve the whole ſanguiferous ſyſtem of the head; and the ſame effuſion will alſo commonly prevent an hemorrhagy happening at the ſame time in any other part of the body.

758. From theſe principles, it will appear why hemorrhagies of the noſe, ſo frequent before the period of puberty, or of the acme, ſeldom happen after theſe periods: and I muſt obſerve further, that although they ſhould occur, they would not afford any objection to my doctrine, as

ſuch hemorrhagies might be imputed to a peculiar laxity of the veſſels of the noſe, and perhaps to a habit acquired with reſpect to theſe veſſels; while the balance of the ſyſtem might be otherwiſe duly adjuſted.

759. When the proceſs of the growth of the body goes on regularly, and the balance of the ſyſtem is properly adjuſted to the gradual growth of the whole, as well as to the ſucceſſive growth of the ſeveral parts, even a plethoric ſtate does not produce any hemorrhagy, or at leaſt any after that of the noſe: but if, while the plethoric ſtate continues, any inequality ſhall alſo ſubſiſt in any of the parts of the ſyſtem, congeſtions, hemorrhagic or inflammatory, may be ſtill readily formed.

760. In general, it may be obſerved, that, when the ſeveral parts of the ſyſtem

of the aorta have attained their full growth, and are duly balanced with one another, if then any conſiderable degree of plethora remain or ariſe, the nicety of the balance will be between the ſyſtems of the aorta and pulmonary artery, or between the veſſels of the lungs and thoſe of all the reſt of the body. And although the leſſer capacity of the veſſels of the lungs is commonly compenſated by the greater velocity of the blood in them; yet, if this velocity be not always adjuſted to the neceſſary compenſation, it is probable that a plethoric ſtate of the whole body will always be eſpecially felt in the lungs; and, therefore, that an hemorrhagy, as the effect of a general plethora, may be frequently occaſioned in the lungs, even though there be no fault in their conformation.

761. In ſome caſes, perhaps, an hemorrhagy from the lungs, or an hemop-

tyſis, does ariſe from the general plethoric ſtate of the body; but an hemoptyſis more frequently does, and may be expected to happen, from a faulty proportion between the capacity of the lungs and that of the reſt of the body.

762. When ſuch a diſproportion takes place, it will be evident, that an hemoptyſis will eſpecially happen about the time that the body is approaching to its acme; that is, when the ſyſtem of the aorta has arrived at its utmoſt extenſion and reſiſtance, and when, therefore, the plethoric ſtate of the whole muſt eſpecially affect the lungs.

763. Accordingly, it has been conſtantly obſerved, that the hemoptyſis eſpecially occurs about the time of the body's arriving at its acme; but I muſt remark alſo, that the hemorrhagy may occur ſooner or later, according as the balance

between the veſſels of the lungs, and and thoſe of the ſyſtem of the aorta, happen to be more or leſs exactly adjuſted to one another; and it may therefore often occur much later than the period mentioned, when that balance, though not quite even, is however not ſo ill adjuſted, but that ſome other concurring cauſes are neceſſary to give it effect.

764. It was antiently remarked by Hippocrates, and has been confirmed by modern obſervation, that the hemoptyſis generally occurs in perſons between the age of fifteen and that of five-and thirty; that it may happen at any time between theſe two periods; but that it ſeldom happens before the former, or after the latter; and it may be proper here to enquire into the reaſon of theſe two limitations.

765. With reſpect to the firſt, the reaſon of it has already been explained in 762 and 763.

With reſpect to the ſecond limitation, I expect that the reaſon of it will be underſtood from the following conſiderations.

It has been already obſerved, that the extenſion and growth of the body require the plethoric ſtate of the arterial ſyſtem; and nature has provided for this, partly by the conſtitution of the blood being ſuch, that a great portion of it is unfit to paſs into the exhalants and excretories; partly by giving a certain denſity and reſiſtance to the ſeveral exhalants and excretories through which the fluids might paſs out of the red arteries; and partly, but eſpecially, by a reſiſtance in the veins to the free paſſage of the blood into them from the arteries.

766. With reſpect to this laſt and chief circumſtance, it appears from the experiments of Sir Clifton Wintringham, in his *Experimental Inquiry*, that the proportional denſity of the coats of the veins to that of the coats of the arteries, is greater in young than in old animals: From which it may be preſumed, that the reſiſtance to the paſſage of the blood from the arteries into the veins, is greater in young animals than in old; and, while this reſiſtance continues, the plethoric ſtate of the arteries muſt be conſtantly continued and ſupported. As however the denſity of the coats of the veſſels, conſiſting chiefly of a cellular texture, is increaſed by preſſure; ſo, in proportion as the coats of the arteries are more expoſed to preſſure by diſtenſion than thoſe of the veins, the former, in the progreſs of the growth of the body, muſt increaſe much more in denſity than the latter; and,

therefore, the coats of the arteries, in reſpect of denſity and reſiſtance, muſt come, in time, not only to be in balance with thoſe of the veins, but to prevail over them; a fact which is ſufficiently proved by the experiments of the above-mentioned ingenious author.

By theſe means, the proportional quantities of blood in the arteries and veins muſt change in the courſe of life. In younger animals, the quantity of blood in the arteries muſt be proportionally greater than in old ones; but by the increaſing denſity of the arteries, the quantity of blood in them muſt be continually diminiſhing, and that in the veins be proportionally increaſing, ſo as at length to be in a proportionally greater quantity than that in the arteries. When this change happens in the proportional quantities of the blood in the arteries and veins, it muſt be evident that the plethoric ſtate of the arteries will be in a great meaſure taken off; and, therefore, that the arterial hemorrhagy is no longer likely to happen; but that, if a general plethoric ſtate afterwards take place in the ſyſtem, it muſt eſpecially appear in the veins.

767. The change I have mentioned to happen in the ſtate of the arterial and venous ſyſtems, is properly ſuppoſed to take place in the human body about the age of thirty-five, when it is manifeſt that the vigour of the body, which depends ſo much upon the fulneſs and tenſion of the arterial ſyſtem, no longer increaſes; and therefore it is, that the ſame age is the period, after which the arterial hemorrhagy, hemoptyſis, hardly ever appears. It is true, there are inſtances of the hemoptyſis happening at a later period; but it is for the reaſons given (758), which ſhow that an hemorrhagy may happen at any period of life, from accidental cauſes forming congeſtions,

geſtions, independent of the ſtate of the balance of the ſyſtem at that particular period.

768. I have ſaid (766), that if, after the age of thirty-five, a general and preternatural plethoric ſtate occur, it muſt eſpecially appear in the venous ſyſtem; and I muſt now obſerve, that this venous plethora may alſo give occaſion to hemorrhagy.

769. If a plethoric ſtate of the venous ſyſtem take place, it is to be preſumed, that it will eſpecially and in the firſt place affect the ſyſtem of the vena portarum, in which the motion of the venous blood is more ſlow than elſewhere; in which the motion of the blood is little aſſiſted by external compreſſion; and in which, from the want of valves in the veins that form the vena portarum, the motion of the blood is little aſſiſted by the compreſſion that is applied;

plied; while, from the ſame want of valves in thoſe veins, the blood is more ready to regurgitate in them. Whether any regurgitation of the blood can produce an action in the veins, and which inverted, or directed towards their extremities, can force theſe, and occaſion hemorrhagy, may perhaps be diſputed: but it appears to me that an hemorrhagy, produced by a plethoric ſtate of the veins, may be explained in another and more probable manner. If the blood be accumulated in the veins, from any interruption of its proper courſe, that accumulation muſt reſiſt the free paſſage of the blood from the arteries into the veins. This again muſt produce ſome congeſtion in the extremities of the red arteries, and therefore ſome increaſed action in them, which muſt be determined with more than uſual force, both upon the extremities of the arteries, and upon the exhalants proceeding from them; and this force may occaſion an effuſion of blood, either by anaſtomoſis or rupture.

770. In this manner I apprehend the hemorrhoidal flux to be explained, ſo far as it depends upon the ſtate of the whole ſyſtem. It appears moſt commonly to proceed from the extremities of the hemorrhoidal veſſels, which, being the moſt dependent and diſtant branches of thoſe veins that form the vena portarum, are therefore the moſt readily affected by every accumulation of blood in that ſyſtem of veins, and conſequently by any general plethora in the venous ſyſtem.

771. It is here to be obſerved, that I have ſpoken of this hemorrhagy as proceeding from the hemorrhoidal veſſels only, as indeed it moſt commonly does; but it will be readily underſtood, that the ſame accumulation and reſiſtance to the venous blood may, from various cauſes,

affect many of the extremities of the vena portarum, which lie very ſuperficially upon the internal ſurface of the alimentary canal, and give occaſion to what has been called the *Morbus Niger*, or *Melæna*.

772. Another part in which an unuſually plethoric ſtate of the veins may have particular effects, and occaſion hemorrhagy, is the head. In this, the venous ſyſtem is of a peculiar conformation, and ſuch as ſeems intended by nature to give there a ſlower motion to the venous blood. If, therefore, the plethoric ſtate of the venous ſyſtem in general, which ſeems to increaſe as life advances, ſhould at length increaſe to a great degree, it may very readily affect the venous veſſels of the head, and produce there ſuch a reſiſtance to the arterial blood, as to determine this to be poured out from the noſe, or into the cavity of the cranium. The ſpecial effect of

the latter effuſion will be, to produce the diſeaſe termed Apoplexy; and which, therefore, is properly named by Doctor HOFFMAN, *Hemorrhagia Cerebri*: and the explanation of its cauſe, which I have now given, explains well why it happens eſpecially to men of large heads and ſhort necks, and to men in the decline of life, when the powers promoting the motion of the blood are much weakened.

773. I have thus attempted to give the hiſtory of the plethoric and hemorrhagic ſtates of the human body, as they occur at the different periods of life; and hope I have thereby explained, not only the nature of hemorrhagy in general, but alſo of the particular hemorrhagies which moſt commonly appear, and as they occur ſucceſſively at the different periods of life.

SECT. III.

OF THE

REMOTE CAUSES

OF

HEMORRHAGY.

774. In the explanation hitherto given, I have eſpecially conſidered the prediſpoſition to hemorrhagy ; but it is proper alſo, and even neceſſary, to take notice of the occaſional cauſes, which not only concur with the prediſponent, in exciting hemorrhagy,

rhagy, but may alſo ſometimes be the ſole cauſes of it.

775. Theſe occaſional cauſes are,

1. External heat, which, by rarefying the blood, produces or increaſes the plethoric ſtate of the body; and the ſame heat, as giving a ſtimulus to the whole ſyſtem, muſt urge any particular determinations before eſtabliſhed, ſtill further, or may urge to exceſs any inequality, otherwiſe innocent; ſo that, in either way, external heat may immediately excite hemorrhagies, to which there was a prediſpoſition, or may form congeſtions where there were none before, and thereby occaſion hemorrhagy.

2. A conſiderable and ſudden diminution of the weight of the atmoſphere, which ſeems to occaſion the ſame effects as heat,

by producing alſo an expanſion of the blood.

3. Whatever increaſes the force of the circulation, and thereby the velocity of the blood, may operate in the ſame manner as heat, in urging not only previous determinations with violence, but alſo in urging to exceſs inequalities, otherwiſe innocent. All violent exerciſe, therefore, and eſpecially all violent efforts, which, not only by a larger and longer inſpiration, but alſo by the ſimultaneous action of many muſcles interrupting the free motion of the blood, impel it with unuſual force into the extreme veſſels more generally, and, according to the different poſtures of the body, and mode of the effort, into certain veſſels more particularly.

Among the cauſes increaſing the force of the circulation, anger * and other violent active paſſions are to be reckoned.

4. The violent exerciſe of particular parts of the body. If theſe are already affected with congeſtions, or liable to them, ſuch exerciſe may be conſidered as a ſtimulus applied to the veſſels of that particular part. Thus, any violent exerciſe of reſpiration † may excite hemoptyſis, or occaſion its return.

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* Paſſionate children frequently bring on a bleeding of the noſe; and when ſuch an accident happens, the child's face, before the blood breaks out, becomes red, and all the veſſels of the head and neck ſeem diſtended and full.

† As playing on the German flute, or any other wind inſtrument that requires a great force to blow it.

5. The poſtures of the body increaſing determinations, or ligatures occaſioning accumulations of the blood in particular parts of the body.

6. A determination into certain veſſels rendered habitual by the frequent repetition of hemorrhagy from them.

7. Cold, externally applied, as changing the diſtribution of the blood, and determining it in greater quantity into the internal parts.

SECT. IV.

OF THE CURE OF HEMORRHAGY.

776. Having thus conſidered the proximate and remote cauſes of hemorrhagy in general, our next buſineſs is, to treat of the cure of the diſeaſe in the ſame manner.

In entering upon this ſubject, the firſt queſtion which preſents itſelf, is, Whether the cure of hemorrhagies ought to be attempted by art, or if they ſhould be left to the conduct of nature?

777. The latter opinion was the favourite doctrine of the celebrated Dr STAHL, and his followers. They maintained, that the human body is much diſpoſed to a plethoric ſtate; and, conſequently, to many diſorders which nature endeavours to obviate and relieve by exciting hemorrhagy: that this, therefore, is often neceſſary to the balance and health of the ſyſtem: that it is accordingly to be generally encouraged, ſometimes ſolicited, and is not to be ſuppreſſed, unleſs when it goes to great exceſs, or happens in parts in which it may be dangerous.

778. Much of this doctrine may be admitted. The human body, upon many occaſions, becomes preternaturally plethoric; and the dangerous conſequences which might from thence be apprehended, ſeem

to be obviated by an hemorrhagy taking place: and further, the neceſſity of hemorrhagy often appears from hence, that the ſuppreſſion of it ſeems to occaſion many diſorders.

All this ſeems to be juſt; but, in the concluſion drawn from it, there is a fallacy.

779. It appears to me certain, that hemorrhagy, either upon its firſt attack, or upon its after recurrence, is never neceſſary to the health of the body, excepting upon the ſuppoſition, that the plethoric ſtate which ſeems to require the evacuation, cannot be otherwiſe prevented or removed; and as I imagine it poſſible by other means to prevent or remove a plethoric ſtate, ſo I do not think that hemorrhagy is, in all caſes, neceſſary. In general, I am of opinion, that hemorrhagy is to be avoided.

1. Becauſe it does not always happen in parts where it is ſafe.

2. Becauſe often, while it does relieve a plethoric ſtate, it may, at the ſame time, induce a very dangerous diſeaſe.

3. Becauſe it may often go to exceſs, and either endanger life, or induce a dangerous infirmity.

And, laſtly, Becauſe it has a tendency to increaſe the plethoric ſtate it was meant to relieve; to occaſion its own recurrence, (747.); and thereby to induce a habit, which, if left to the precarious and unequal operation of nature, may, from the frequent errors of this, be attended with much danger.

780. It is further to be conſidered, that hemorrhagies do not always ariſe from the neceſſities of the ſyſtem, but often proceed from incidental cauſes. It appears to me, that all hemorrhagies of the latter kind

may be immediately ſuppreſſed, and the repetition of them, as it induces a plethora, and a habit not otherwiſe neceſſary, may be prevented with great advantage.

781. Upon the whole of this ſubject I conclude, that every preternatural hemorrhagy, or, in other words, every one except that of the menſes in females, is to be avoided, and eſpecially the returns of it prevented; and I therefore now proceed to mention, how hemorrhagy, and its recurrences, may, and ſhould be prevented.

782. From the principles delivered above, it will immediately appear, that the prevention, either of the firſt attacks, or of the returns of hemorrhagy, will chiefly, and in the firſt place, depend upon the preventing or removing, any conſiderable degree of a plethoric ſtate which may happen to prevail in the body. It is true, that, where the hemorrhagy depends upon

the particular conformation of certain parts, rather than upon the general plethoric ſtate of the whole; the meaſures for removing or preventing the latter, may not always be ſufficient for preventing hemorrhagy: but at the ſame time it muſt be evident, that determinations, in conſequence of the conformation of particular parts, will always be urged more or leſs, in proportion to the greater or leſſer degree of the plethoric ſtate of the whole ſyſtem; and, therefore, that, even in the caſes depending upon particular conformation, the preventing or removing an unuſually plethoric ſtate, will always be a chief means of preventing hemorrhagy. It is further to be attended to, that there may be ſeveral inequalities in the balance of the ſyſtem, which may have little or no effect unleſs when the ſyſtem becomes preternaturally plethoric; and, therefore, that, in all caſes, the preventing or removing of the plethoric ſtate of the ſyſtem, will be a chief means of preventing the firſt attacks, or the returns of hemorrhagy. It now, therefore, remains to explain, how the plethoric ſtate of the ſyſtem is to be prevented or removed.

783. The fluids of the human body are in continual waſte by the excretions, but are commonly replaced by the aliments taken in; and if the quantity of aliments in any meaſure exceed that of the excretions, an increaſe of the quantity of the fluids of the body, or, in other words, a plethoric ſtate, muſt neceſſarily ariſe. This, to a certain degree, is requiſite for the growth of the body: but, even then, if the proportion of the aliments to the excretions, be greater than is ſuited to the growth of the body, and more certainly ſtill, if, after the growth is completed, when an equality between the *ingeſta* and the *excreta* ſhould be eſtabliſhed, the diſproportion ſtill continue, a preternaturally plethoric ſtate muſt

ariſe. In both caſes, it is evident, that the plethora muſt be prevented or corrected by adjuſting the ingeſta and excreta to each other; which generally may be done, either by diminiſhing the ingeſta, or by increaſing the excreta*. The former may be effected by the management of diet, the latter by the management of exerciſe.

784. The ingeſta may be diminiſhed, either by giving aliment in leſs quantity than uſual, or by giving aliments of a leſs nutritious quality; that is, aliments of a ſubſtance, which, under the ſame bulk and weight, contain leſs of a matter capable of being converted into animal fluids, and more of a matter ready to paſs off by the excretions, and conſequently leſs of a matter to be retained and accumulated in the veſſels.

The choice of aliments ſuited to theſe

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* This effect may ſurely be more ſpeedily produced by uſing both theſe means at once.

purpoſes, muſt be left to be directed by the doctrines of the Materia Medica.

785. The increaſing of the excreta, and thereby diminiſhing the plethoric ſtate of the ſyſtem, is to be obtained by increaſing the exerciſe of the body; and generally for adjuſting the balance between the ingeſta and excreta, and thereby obviating the plethoric ſtate, it is neceſſary that exerciſe, in a due meaſure, be very conſtantly employed *.

786. The obſerving abſtinence, and the employment of exerciſe, for obviating or removing

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* The exerciſe beſt adapted to theſe caſes is ſuch as does not heat the body or increaſe the force of the blood. Hence riding moderately, travelling in a carriage, or ſailing, are preferable to walking. Young people may uſe ſuch gentle exerciſe as may amuſe the mind, and at the ſame time conduce to bodily health, as gardening, ſeveral agricultural labours, or mechanical operations; or ſome of the ſports that require a gentle bodily exertion as bowling, archery, &c.

removing the plethoric ſtate of the body, were formerly conſidered pretty fully, when treating of the gout, (548 to 552.); ſo that the leſs is neceſſary to be ſaid here: and it is now only requiſite to obſerve, that the ſame doubts, as in caſes of the gout, do not occur here with regard to the ſafety of thoſe meaſures, which, in a plethoric ſtate of the body diſpoſing to hemorrhagy, are always admiſſible and proper. Here, however, it is to be obſerved, that ſome choice in the mode of exerciſe is neceſſary, and that it ſhould be different according to the particular determinations which may happen to prevail in the ſyſtem. In general, in the caſe of plethora diſpoſing to hemorrhagy bodily exerciſe will always be hazardous, and geſtation more commonly ſafe.

787. Artificial evacuations may be employed to diminiſh the plethoric ſtate of the body; and when, at any time, it has become conſiderable, and immediately threa-

tens a diſeaſe, theſe evacuations ſhould be made to the quantity that the ſymptoms ſeem to require. But it is conſtantly to be attended to, that blood-lettings are improperly employed to prevent a plethora, as they have a tendency to increaſe it; and as they require to be often repeated, and are thereby apt to induce a habit which may be attended with much danger*.

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* Briſk purges are perhaps preferable to every other mode of evacuating the ingeſta; and in theſe caſes we may have recourſe to draſtics without any apprehenſion of danger. The following formulæ may ſerve as ſpecimens of the purges uſeful in theſe caſes.

R. Pulv. Rad. Jalap. ℥ ß
Aromat. ʒ i.
Sal. Tart. ʒ ß
Syr. Simp. q. s.
M. f. Elect.

788. While a plethora, and thereby the prediſpoſition to hemorrhagy, is avoided, or removed, the other meaſures neceſſary for preventing the occurrence of this, are thoſe for avoiding the remote cauſes. Theſe have been enumerated in 775.; and the means

This electuary may be divided into four doſes, one of which may be taken early in the morning, as occaſion may require.

R. Pilul. Rufi, ʒß
Calomel. gr. vi.
Syr. ſimpl. q. s.
M. f. Maſſa in pilulas equales ſex dividend.

Two of theſe pills may be taken in the evening, and the remaining four the following morning.

R. Reſin. jalap. ℈i.
Tere in mortar. cum ſacch. alb. ʒß
Amygdal. dulc. decorticat. N°. ii.
Adde gradatim Aq. Cinnamom. ſimpl. ℥i.
M. f. hauſt. mane ſumend.

This is a very elegant purge, and has the peculiar advantage of operating powerfully without griping or occaſioning much inconvenience.

means of avoiding them, ſo far as within our power, are ſufficiently obvious.

779. Having thus mentioned the means of preventing either the firſt attacks, or the recurrence of hemorrhagy; I muſt next ſay how it is to be managed when it has actually come on.

790. When an hemorrhagy has come on which appears to have ariſen from a preternaturally plethoric ſtate, or from ſome change in the balance of the ſanguiferous ſyſtem, no meaſures are to be immediately taken for ſuppreſſing it; as we may expect, that, when the quantity of blood neceſſary for the relief of the ſyſtem is poured out, the effuſion will ſpontaneouſly ceaſe *.

791. In many caſes, however, it may be ſuſpected, that the quantity of blood poured

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* The doctrine here delivered, and the practice founded on it, is pure Stahlianiſm; and is, doubtleſs, in theſe caſes the

out, is not exactly in proportion to the neceſſities of the ſyſtem, either for relieving a general plethora or a particular congeſtion, but that it is often to a greater quantity than theſe require. This we ſuppoſe to happen in conſequence of an inflammatory diatheſis prevailing, and of a febrile ſpaſm being formed; and therefore it is in many caſes proper, as well as for the moſt part ſafe, to moderate the evacuation, and, when it threatens to go to exceſs, to ſuppreſs it altogether.

792. An hemorrhagy may be moderated by avoiding any irritation that might concur to increaſe it; ſo that every part of the antiphlogiſtic regimen is to be obſerved; particularly external heat, both as it rarefies

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the beſt practice. A patient, however, is not always ſatisfied when the phyſician is inactive, which often obliges him to preſcribe ſome of the medicamenta inertiora, and the choice of them muſt be left to the practitioner's own ſagacity.

ſies the fluids, and ſtimulates the ſolids, is to be carefully avoided: and, it is probable, that in all caſes an hemorrhagy may be ſafely moderated by cool air applied, and cold drink exhibited.

793. A ſecond means for the ſame purpoſe, is, the uſe of refrigerant medicines, and particularly of acids and nitre *.

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* The refrigerant medicines have been ennumerated in former notes, art. 134 and 135. The Tinctura roſarum is a very proper acid refrigerant in moſt hemorrhagies. The doſe of it muſt be proportioned to the exigency of the caſe; it ought never to exceed four ounces in the ſpace of an hour; an ounce every half hour is generally ſufficient, and a greater quantity at a time frequently occaſions gripes, and by its irritation, increaſes the diſeaſe; eſpecially if it does not produce a diarrhœa which is ſeldom the caſe. With reſpect to nitre, the precautions, mentioned in the note on article 135, muſt be obſerved. The dulcified ſpirit of vitriol or of nitre are not always ſafe medicines in theſe caſes, as they heat and irritate. The acid of tartar, in the form deſcribed in the note on art. 134, anſwers very well in moſt caſes.

794. A third means which has been frequently employed, is that of blood-letting. The propriety of this practice may be doubtful, as the quantity of blood poured out by the hemorrhagy, may be ſuppoſed to anſwer the purpoſe of an evacuation in any other way; and I am ready to allow, that the practice has been often ſuperfluous, and ſometimes hurtful, by making a greater evacuation than was neceſſary or ſafe. At the ſame time, I apprehend it is not for the mere purpoſe of evacuating, that blood-letting is to be practiſed in the cure of hemorrhagy; but that it is further neceſſary for taking off the inflammatory diatheſis which prevails, and the febrile ſpaſm that has been formed. Accordingly, in the caſe of hemorrhagy, when the pulſe is not only frequent, but quick and full, and does not become ſofter or ſlower upon the flowing of the blood, and that the effuſion is profuſe, and threatens to continue

ſo, it appears to me, that blood-letting may be neceſſary, and I have often found it uſeful. It ſeems probable alſo, that the particular circumſtances of veneſection may render it more powerful for taking off the tenſion and inflammatory irritation of the ſyſtem, than any gradual flow from an artery.

795. That a ſpaſm of the extreme veſſels has a ſhare in ſupporting hemorrhagy, appears to me probable from hence, that bliſtering has been often found uſeful in moderating and ſuppreſſing the diſeaſe.

796. Do emetics and vomiting contribute to the cure of hemorrhagy? See DR BRYAN ROBINSON on the virtues and power of medicines.

797. When an hemorrhagy is very profuſe, and ſeems to endanger life, or even threaten to induce a dangerous infirmity, it is agreed on all hands, that it is to be

immediately ſuppreſſed by every means in our power; and particularly, that, beſides the means above-mentioned for moderating the diſeaſe, aſtringents, internal or external, where the latter can be applied, are to be employed for ſuppreſſing it.

798. The internal aſtringents are either vegetable or foſſil.

The vegetable aſtringents are ſeldom very powerful in the cure of any hemorrhagies, except thoſe of the alimentary canal.

The foſſil aſtringents are more powerful; but ſome choice amongſt the different kinds may be proper.

The chalybeates, ſo frequently employed, do not appear to me to be very powerful.

The preparations of lead are certainly more ſo, but are otherwiſe of ſo pernicious a quality, that they ſhould not be employed except in caſes of the utmoſt danger. The Tinctura Saturnina, or Antiphthiſica, at it has been called, appears to be of little efficacy *; but whether from the ſmall portion of lead which it contains, or from the ſtate in which the lead is in it, I am uncertain.

The foſſil aſtringent that appears to me the moſt powerful, and at the ſame the the moſt ſafe, is alum *.

799. External

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* It is a very dangerous medicine, and ought to be uſed with the utmoſt caution. But ſince its efficacy is doubtful, we had better abandon it altogether, except when every other remedy fails.

* Alum frequently irritates if given in two large doſes at firſt, proving ſometimes a purgative and ſometimes an emetic.

799. External aſtringents, when they can be applied, are more effectual than the internal. The choice of theſe is left to the ſurgeons.

800. The moſt powerful of all aſtringents appears to me to be cold, which may be employed, either by applying cold water to the ſurface of the body, or by throwing it into the internal parts *.

801. For

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emetic. In caſes of great danger, however, it muſt be given in large quantities by frequently repeating ſmall doſes. Five grains is a ſufficient doſe to begin with; but it may be repeated every hour, or every half hour. Some authors have given it in doſes of a ſcruple ſeveral times a-day; but that is certainly too great a quantity at once.

* Van Swieten relates a caſe of a bleeding at the noſe being ſtopped by the application of pledgets, dipped in cold wine and water, to the ſcrotum; a ſhivering was produced, and the bleeding ſtopped.

801. For ſuppreſſing hemorrhagies, many ſuperſtitious remedies and charms * have been recommended, and pretended to have been employed with ſucceſs. The ſeeming ſucceſs of theſe, however, has been generally owing to the by-ſtanders miſtaking a ſpontaneous ceaſing of the hemorrhagy for the effect of the remedy. At the ſame time, I believe, that thoſe remedies may have been ſometimes uſeful, by impreſſing the mind with horror, awe, or dread.

802. Upon occaſion of profuſe hemorrhagies, opiates have been employed with advantage;

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* It is aſtoniſhing that theſe charms ſhould continue in uſe in this enlightened age. They are practiſed among the country people frequently. Some of them, however, act mechanically, as the application of the great key of the church door to the nape of the neck, in bleedings at the noſe; drinking large draughts of cold water out of a human ſkull; &c. The cold iron and the cold water were in fact proper remedies.

advantage; and, when the fulneſs and inflammatory diatheſis of the ſyſtem have been previouſly taken off by the hemorrhagy itſelf, or by blood-letting, I think opiates may be employed with ſafety *.

803. For reſtraining hemorrhagy, ligatures have been applied upon the limbs, in the view of retarding the return of the venous blood from the extremities; but they appear to me to be of uncertain and ambiguous uſe.

804. In the caſe of profuſe hemorrhagies, no pains are to be taken to prevent a

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* Opium, however, ought to be cautiouſly employed in active hemorragies, which are frequently accompanied with a phlogiſtic diatheſis; and it is well known, that in ſuch a diatheſis, opium is generally, if not univerſally, hurtful. But, as the author obſerves, when the hemorrhagy has reduced the inflammatory diatheſis, we may then give opium freely; and for this purpoſe large doſes are preferable to ſmaller ones.

a Deliquium Animi, or fainting, as the happening of this is often the moſt certain means of ſtopping the hemorrhagy*.

805. Having thus delivered the general doctrine of hemorrhagy, I proceed to conſider the particular caſes of it. It may perhaps be remarked, that I have marked fewer of theſe than are commonly enumerated by the noſologiſts; but my reaſons for differing from theſe authors, muſt be left to a noſological diſcuſſion, to be entered into elſewhere more properly than here.

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* Attention, however, is neceſſary in this caſe, as fainting is frequently the forerunner of death.

CHAP. II.

OF THE

EPISTAXIS

OR

HEMORRHAGY OF THE NOSE.

806. THE ſtate of the veſſels upon the internal ſurface of the noſe being ſuch as already mentioned (757), renders an hemorrhagy from that more frequent than from any other part of the body.

807. The blood commonly flows from one noſtril only, and probably becauſe an hemorrhagy from one veſſel relieves the congeſtion in all the neighbourging veſſels.

The blood flowing from both noſtrils at the ſame time, ſhows commonly a more conſiderable diſeaſe.

808. This hemorrhagy happens to perſons of every conſtitution and temperament, but moſt frequently to thoſe of a plethoric habit, and ſanguine temperament. It happens to both ſexes, but moſt frequently to the male;

809. This hemorrhagy may occur at any time of life; but moſt commonly happens to young perſons, owing to the ſtate of the balance of the ſyſtem peculiar that age, as mentioned in 756.

810. Although generally it happens to perſons before they have arrived at their full growth; and more rarely afterwards; yet ſometimes it happens to perſons after their acme, and during the ſtate of manhood: and it muſt then be imputed to an unuſually plethoric ſtate of the ſyſtem; to an habitual determination of the blood to the veſſels of the noſe; or to the particular weakneſs of theſe.

811. In all theſe caſes the diſeaſe may be conſidered as an hemorrhagy purely arterial, and depending upon an arterial plethora; but it ſometimes occurs in the decline of life, when probably it depends upon and may be conſidered as a mark of a venous plethora of the veſſels of the head. See 772.

812. This hemorrhagy happens alſo at any period of life, in certain febrile diſ-

eaſes, which are altogether or partly of an inflammatory nature, and which ſhow a particular determination of the blood to the veſſels of the head. Theſe diſeaſes often admit of a ſolution by this hemorrhagy, when it may be properly termed *critical.*

813. The diſeaſe ſometimes comes on without any previous ſymptoms; particularly, when ſome external violence has a ſhare in producing it. But, when it proceeds entirely from an internal cauſe, it is commonly preceded by headachs, redneſs of the eyes, a florid colour of the face, an unuſual pulſation in the temples, a ſenſe of fulneſs about the noſe, and an itching of the noſtrils. A bound belly, pale urine, coldneſs of the feet, and cold ſhivering over the whole body, are alſo ſometimes among the ſymptoms that precede the diſeaſe.

814. From the weakneſs of the veſſels of the noſe, the blood often flows from them without any conſiderable effort of the whole ſyſtem, and therefore without any obſervable febrile diſorder; which, however, in many caſes, is, in all its circumſtances, very diſcernible.

815. An hemorrhagy of the noſe happening to young perſons, is, and may generally be conſidered as a ſlight diſeaſe of little conſequence, and hardly requiring any remedy. But, even in young perſons, when it recurs very frequently, and is very copious, it will require particular attention, as it is to be conſidered as a mark of arterial plethora; and, as frequently returning, it may increaſe the plethoric ſtate; which, in a more advanced ſtage of life, may give the blood a determination to parts from which the hemorrhagy would be more dangerous. All this will more

particularly require attention, according as the marks of plethora, and of particular congeſtion, preceding the hemorrhagy, are more conſiderable; and as the flowing of the blood is attended with a more conſiderable degree of febrile diſorder.

816. When the epiſtaxis happens to perſons after their acme, returning frequently, and flowing copiouſly, it is always to be conſidered as a dangerous diſeaſe, and as more certainly threatening the conſequences mentioned in the laſt paragraph.

817. When this hemorrhagy happens in the decline of life, it may be conſidered as in itſelf very ſalutary: but at the ſame time, it is to be conſidered as a mark of a very dangerous ſtate of the ſyſtem; that is, as a mark of a very ſtrong tendency to a venous plethora in the veſſels of the head: and I have accordingly obſerved it often

followed by apoplexy, palſy, or ſuch like diſeaſes.

818. When an hemorrhagy from the noſe happens in febrile diſeaſes, as mentioned in 812, and is in pretty large quantity, it may be conſidered as critical and ſalutary; but it is very apt to be profuſe, and even in this way dangerous.

It upon ſome occaſions occurs during the eruptive fever of ſeveral exanthemata, and is in ſuch caſes ſometimes ſalutary; but, if theſe exanthemata be acompanied with any putrid tendency, this hemorrhagy, like artificial blood lettings, may have very bad effects.

819. Having thus explained the ſeveral circumſtances of epiſtaxis, I proceed to conſider the management and cure of it. I uſe the expreſſion of *management*, becauſe it has been uſually thought to require no

cure, but that nature ſhould be allowed to throw out blood in this way very frequently; and as often as it appears to ariſe from internal cauſes, that is, from a ſtate of the ſyſtem ſuppoſed to require ſuch evacuation.

820. I am however of opinion, for the reaſons given in 779, that this diſeaſe is very ſeldom to be left to the conduct of nature; and that in all caſes it ſhould be moderated by keeping the patient in cool air; by giving cold drink; by keeping the body and head erect; by avoiding any blowing of the noſe, ſpeaking, or other irritation: and, when the blood has flowed for ſome time, without ſhowing any tendency to ceaſe, a profuſe bleeding is to be prevented by meaſures employed to ſtop it; ſuch as preſſing the noſtril from which the blood flows, waſhing the face with cold water, or applying this to other parts of the body.

821. Even in the caſe of young perſons, where the diſeaſe is leaſt hazardous, and even in the firſt attacks, I judge ſuch meaſures to be proper: but they will be ſtill more proper, if the diſeaſe frequently recurs without any external violence; if the returns ſhall happen to perſons of a habit diſpoſed to be plethoric; and, more particularly, if the marks of a plethoric ſtate appear in the precedent ſymptoms. (813.)

822. Even in young perſons, if the bleeding be very profuſe and long continued, and more eſpecially if the pulſe become weak and the face pale, I apprehend it will be proper to ſuppreſs the hemorrhagy by every means in our power. See 797, and following paragraphs *.

823. Fur-

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* Beſide the general directions referred to above, plugs of lint or cotton, impregnated with vinegar and a ſolution of alum, are recommended. Thick cotton threads, impregnated

823. Further, in the ſame caſe of young perſons, when the returns of this hemorrhagy become frequent, and eſpecially with the marks of a plethoric habit, I think it neceſſary to employ ſuch a regimen as may prevent a plethoric ſtate, (783,—787). At the ſame time, care ſhould be taken to avoid all circumſtances which may determine the blood more fully to the veſſels of the head, or prevent its free return from them; and, by keeping an open belly, to make ſome derivation from them *.

824. In

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nated with theſe ſtyptic ſolutions, have been paſſed through the noſtril, and brought out by the mouth by means of a bent probe, with great ſucceſs.

* For this purpoſe Glauber's ſalt ſeems peculiarly adapted. It operates ſpeedily, and without too much irritation; evacuating, at the ſame time, not only the contents of the inteſtinal canal, but the ſuperfluities of the ſanguiferous ſyſtem.

824. In adult perſons, liable to frequent returns of the epiſtaxis, the whole of the meaſures propoſed (823), are more certainly and freely to be employed. When, with the circumſtances mentioned in 813, the tendency to a profuſe hemorrhagy appears, a bleeding at the arm may be proper, even in young perſons; but, in the caſe of adults, it will be ſtill more allowable, and even neceſſary.

825. In perſons of any age liable to frequent returns of this hemorrhagy, when the meaſures propoſed in 817, *et ſeq.* ſhall have been neglected, or, from peculiar circumſtances in the balance of the ſyſtem, ſhall have proved ineffectual, and the ſymptoms threatening hemorrhagy (838), ſhall appear, it will then be proper, by blood-letting, cooling purgatives, and every part of the antiphlogiſtic regimen, to prevent the hemorrhagy, or at leaſt to prevent its being profuſe when it does happen.

826. In the circumſtances juſt now mentioned (825), the meaſures propoſed are proper, and even neceſſary; but it ſhould at the ſame time be obſerved, that theſe are practiſed with much leſs advantage than thoſe pointed out in 824; becauſe though thoſe ſuggeſted here may prevent the coming on of the hemorrhagy for the preſent, they certainly however diſpoſe to the return of that plethoric ſtate which required their being uſed; and there can be no proper ſecurity againſt returns of the diſeaſe, but by purſuing the means propoſed in 823.

827. When the hemorrhagy of the noſe happens to perſons approaching to their full growth, and when its returns have been preceded by the ſymptoms 813, it may be ſuppoſed, that, if the returns can be prevented by the meaſures propoſed in 825, theſe may be ſafely employed; as the plethoric ſtate induced will be rendered

ſafe, by the change which is ſoon to take place in the balance of the ſyſtem. This, however, cannot be admitted; as the evacuations practiſed upon this plan will have all the conſequences, which I have already obſerved may follow the recurrence of the hemorrhagy itſelf.

828. When the hemorrhagy of the noſe ſhall be found to make its returns at nearly ſtated periods, the meaſures for preventing it (825), may be practiſed with greater certainty; and, upon every repetition of blood-letting, by diminiſhing the quantity taken away, its tendency to induce a plethora may be in ſome meaſure avoided. When, indeed, the repetition of evacuations is truly unavoidable, the diminiſhing them upon every repetition is properly practiſed: but it is a practice of nice and precarious management, and ſhould by no means be truſted to, ſo far as to ſuperſede the meaſures propoſed in 825. where-ever theſe can be admitted.

829. When the hemorrhagy of the noſe happens in conſequence of a venous plethora in the veſſels of the head, as in 772. the flowing of the blood pretty largely may be allowed, eſpecially when it happens after the ſuppreſſion or ceaſing of the menſtrual or hemorrhoidal flux. But, though the flowing of the blood is, on its firſt occurring, to be allowed, there is nothing more proper than guarding againſt its returns. This is to be done not only by the meaſures propoſed in 783 *et ſeq.* but, as the effects of a plethoric ſtate of the veſſels of the head are very uncertain, ſo, upon any appearance of it, and eſpecially upon any threatening of hemorrhagy, the plethora is to be removed, and the hemorrhagy to be obviated immediately by proper evacuations; as blood-letting, purging, and iſſues, or by reſtoring ſuppreſſed evacuations, where this can be done.

CHAP.

CHAP. III.

OF THE

HEMOPTYSIS,

OR

HEMORRHAGY FROM THE LUNGS.

SECT. I.

Of the PHENOMENA *and* CAUSES *of* HEMOPTYSIS.

830. WHEN, after ſome affection of the breaſt, blood is thrown out from the mouth, and is brought out with more or leſs of coughing, there can be no doubt that it comes from the lungs; and

this generally aſcertains the diſeaſe of which I am now to treat. But there are caſes in which the ſource of the blood ſpit out is uncertain; and therefore, ſome other conſiderations to be mentioned hereafter, are often neceſſary to aſcertain the exiſtence of an hemoptyſis.

831. The blood-veſſels of the lungs are more numerous than thoſe of any other part of the body of the ſame bulk. Theſe veſſels, of the largeſt ſize, as they ariſe from the heart, are more immediately than in any other part ſubdivided into veſſels of the ſmalleſt ſize; and theſe ſmall veſſels ſpread out near to the internal ſurfaces of the bronchial cavities, are ſituated in a looſe cellular texture, and covered by a tender membrane only: ſo that, conſidering how readily and frequently theſe veſſels are gorged with blood, we may underſtand why an hemorrhagy from them is, next to that of the noſe, the moſt frequent of any; and

particularly, why any violent ſhock given to the whole body ſo readily occaſions an hemoptyſis.

832. An hemoptyſis may be occaſioned by external violence, at any period of life; and I have explained above (760), why, in adult perſons, while the arterial plethora ſtill prevails in the ſyſtem, that is, from the age of fifteen to that of five-and-thirty, an hemoptyſis may at any time be produced, merely by a plethoric ſtate of the lungs.

833. But it has been alſo obſerved above, (761.); that an hemoptyſis more frequently ariſes from a faulty proportion between the capacity of the veſſels of the lungs and that of thoſe of the reſt of the body. Accordingly it is often a hereditary diſeaſe, which implies a peculiar and faulty conformation. And the diſeaſe alſo happens eſpecially to perſons who diſ-

cover the ſmalleſt capacity of their lungs, by the narrowneſs of their cheſt, and by the prominency of their ſhoulders ; which laſt is a mark of their having been long liable to a difficult reſpiration.

834. With theſe circumſtances alſo the diſeaſe happens eſpecially to perſons of a ſanguine temperament; in whom, particularly, the arterial plethora prevails. It happens likewiſe to perſons of a ſlender delicate make, of which a long neck is a mark; to perſons of much ſenſibility and irritability, and therefore of quick parts, whoſe bodies are generally of a delicate ſtructure; to perſons who have been formerly liable to frequent hemorrhagies of the noſe; to perſons who have ſuffered a ſuppreſſion of any hemorrhagy they had formerly been liable to, the moſt frequent inſtance of which is in females who have ſuffered a ſuppreſſion of their menſtrual flux; and, laſtly, to perſons who

have ſuffered the amputation of any conſiderable limb.

835. In moſt of theſe caſes (834.), the diſeaſe happens eſpecially to perſons about the time of their coming to their full growth, or ſoon after it, and this for the reaſons fully ſet forth above.

836. From all that has been ſaid from 831, to 835, the prediſponent cauſe of hemoptyſis will be ſufficiently underſtood, and the diſeaſe may happen from the mere circumſtance of the prediſponent cauſe ariſing to a conſiderable degree. In the prediſpoſed, however, it is often brought on by the concurrence of various occaſional and exciting cauſes. One of theſe, and perhaps a frequent one, is external heat; which, even when in no great degree, will bring on the diſeaſe in ſpring, and the beginning of ſummer, while the heat rareſies

rarefies the blood more than it relaxes the ſolids which had been before contracted by the cold of winter. Another exciting cauſe is a ſudden diminution of the weight of the atmoſphere, eſpecially when concurring with any effort in bodily exerciſe. This effort, too, alone, may often, in the prediſpoſed, be the exciting cauſe; and, more particularly, any violent exerciſe of reſpiration. In ſhort, in the prediſpoſed, any degree of external violence alſo may bring on the diſeaſe.

837. Occaſioned by one or other of theſe cauſes (836.), the diſeaſe comes on with a ſenſe of weight and anxiety in the cheſt, ſome uneaſineſs in breathing, ſome pain of the breaſt or other parts of the thorax, and ſome ſenſe of heat under the ſternum; and very often, before the diſeaſe appears, a ſaltiſh taſte is perceived in the mouth.

838. Immediately before the appearance of blood, a degree of irritation is felt at the top of the larynx. To relieve this, a hawking is made, which brings up a little blood, of a florid colour, and ſomewhat frothy. The irritation returns; and, in the ſame manner, more blood of a like kind is brought up, with ſome noiſe in the windpipe, as of air paſſing through a fluid.

839. This is commonly the manner in which the hemoptyſis begins; but ſometimes at the very firſt the blood comes up by coughing, or at leaſt ſomewhat of coughing accompanies the hawking juſt now mentioned.

840. The blood iſſuing is ſometimes at firſt in very ſmall quantity, and ſoon diſappears altogether: but, in other caſes, eſpecially when it repeatedly occurs, it is in greater quantity, and frequently continues to appear at times for ſeveral days together.

ther. It is ſometimes profuſe; but rarely in ſuch quantity as either by its exceſs, or by its ſudden ſuffocation, to prove immediately mortal. It commonly either ceaſes ſpontaneouſly, or is ſtopped by the remedies employed.

841. When blood is thrown out from the mouth, it is not always eaſy to determine from what internal part it proceeds; whether from the internal ſurface of the mouth itſelf, from the fauces, or adjoining cavities of the noſe, from the ſtomach, or from the lungs. It is, however, very neceſſary to diſtinguiſh the different caſes; and, in moſt inſtances, it may be done by attending to the following conſiderations.

842. When the blood ſpit out, proceeds from ſome part of the internal ſurface of mouth itſelf, it comes out without any hawking or coughing: and generally, up-

on inſpection, the particular ſource of it becomes evident.

843. When blood proceeds from the fauces, or adjoining cavities of the noſe, it may be brought out by hawking, and ſometimes by coughing, in the manner we have deſcribed in 837, and 839.; ſo that, in this way, a doubt may ariſe concerning its real ſource. A patient often lays hold of theſe circumſtances to pleaſe himſelf with the opinion of its coming from the fauces, and he may be allowed to do ſo: but a phyſician cannot readily be deceived, if he conſider, that a bleeding from the fauces is more rare than one from the lungs; that the former ſeldom happens but to perſons who have been before liable either to an hemorrhagy of the noſe, or to ſome evident cauſe of eroſion; and, in moſt caſes, by looking into the fauces, the diſtillation of the blood, if it comes from thence, will be perceived.

844. When blood proceeds from the lungs, the manner in which it is brought up will commonly ſhow from whence it comes: but, independent of that, there are many circumſtances which may concur to point it out, ſuch as the period of life, the habit of body, and other marks of a prediſpoſition (833,—835); and together with theſe, the occaſional cauſes (836), having been immediately before applied.

845. When vomiting accompanies the throwing out of blood from the mouth, as vomiting and coughing often mutually excite each other; ſo they may be frequently joined, and render it doubtful whether the blood thrown out proceeds from the lungs or from the ſtomach. We may however generally decide, by conſidering, that blood does not ſo frequently proceed from the ſtomach as from the

lungs: that blood proceeding from the ſtomach commonly appears in greater quantity, than when it proceeds from the lungs: that the blood proceeding from the lungs is uſually of a florid colour, and mixed with a little frothy mucus only; whereas the blood from the ſtomach is commonly of a darker colour, more grumous, and mixed with the other contents of the ſtomach: that the coughing or vomiting, according as the one or the other firſt ariſes, in the caſes in which they are afterwards joined, may ſometimes point out the ſource of the blood: and, laſtly, that much may be learned from the circumſtances and ſymptoms which have preceded the hemorrhagy.

Thoſe which precede the hemoptyſis, enumerated in 837, are moſt of them evident marks of an affection of the lungs. And, on the other hand, the, hematemeſis, or iſſuing of blood from the ſtomach, has alſo its peculiar ſymptoms and circumſtances preceding it; as, for inſtance, ſome morbid affection of this organ, or at leaſt ſome pain, anxiety, and ſenſe of weight, refered diſtinctly to the region of the ſtomach. To all this may be added, that the vomiting of blood happens more frequently to females than to males; and to the former, in conſequence of a ſupreſſion of their menſtrual flux: and by attending to all theſe conſiderations (842,—845), the preſence of the hemoptyſis may commonly be ſufficiently aſcertained.

SECT. II.

OF THE

CURE

OF

HEMOPTYSIS.

846. THIS diſeaſe is ſometimes attended with little danger; as, when it happens to females in conſequence of a ſuppreſſion of the menſes *; when, without any marks of

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* The author might have added, " And when no ſymptoms of phthiſis have preceded or accompanies the hemorrhage.

of a prediſpoſition, it ariſes from external violence; or when, from whatever cauſe ariſing, it leaves behind it no cough, dyſpnœa, or other affection of the lungs. Even in ſuch caſes, however, a danger may ariſe from too large an wound being made in the veſſels of the lungs; from a quantity of red blood being left to ſtagnate in the cavity of the bronchiæ; and particularly, from any determination of the blood being made into the veſſels of the lungs, which, by renewing the hemorrhagy, may have dangerous conſequences. In every inſtance therefore of hemoptyſis, the effuſion is to be moderated by the ſeveral means mentioned (792 to 795.)

847. Theſe meaſures are eſpecially neceſſary when the hemoptyſis ariſes in conſequence of prediſpoſition; and in all caſes where there is the appearance of a large effuſion, or where the hemorrhagy frequently returns, the effuſion is not only

be moderated, but to be entirely ſtopped, and the returns of it prevented by every means in our power. See 797, and following *.

848. The

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* The tincture of roſes has been frequently employed with ſucceſs in theſe caſes: alum, however, is the principal aſtringent. It may be given, either by itſelf in ſmall and often repeated doſes, or combined with terra Japonica. The following formula is very convenient:

R. Alumin.
Terr. Japonic. āā ʒ i.
Conſerv. Roſar. ℥ i.
M. f. Elect. cum ſyr. commun. q. s.

The doſe ought to be proportioned to the exigency of the caſe: in general, the above preſcribed maſs may be divided into ten equal parts; one of which may be given every two hours, or in urgent caſes, every hour. In uſing this medicine, it will be neceſſary to keep the belly open: but for this purpoſe, purgatives are ill adapted, as they carry off with them the medicine that is employed: glyſters are therefore preferable; and in order that they be the more effectual, they ought to be ſomewhat of a ſtimulating nature: as,

R.

848. To ſtop an hemoptyſis, or prevent the returns of it, two medicines have been frequently employed; neither of which I can approve of. Theſe are, chalybeates, and the Peruvian bark. As both of them contribute to increaſe the phlogiſtic diatheſis of the ſyſtem, they can hardly be ſafe in any caſe of active hemorrhagy, and I have frequently found them hurtful.

849. As

R. Infuſ. Sennæ, ℥ vi.
Sal. Cathartic. Amar. ℥ i.
Decoct. Hordei, ℥ viii.
M.

Or,

R. Pulp. Tamarind. ℥ ii.
Crem. Tart. ℥ ß
Coque in Aq. font. q. s. ad colaturæ ℥ xii.
Adde, Mann. ℥ ii.
M.

849. As the hemoptyſis which happens in conſequence of prediſpoſition, is always attended with a phlogiſtic diatheſis ; and, as the bad conſequences of the diſeaſe are eſpecially to be apprehended from the continuance of that diatheſis ; ſo this is to be induſtriouſly taken off by blood-letting, in greater or ſmaller quantity, and more or leſs frequently repeated, according as the ſymptoms ſhall direct. At the ſame time, cooling purgatives are to be employed, and every part of the antiphlogiſtic regimen is to be ſtrictly enjoined. The refrigerants may alſo be adminiſtered ; taking care, however, that the acids, and more eſpecially the nitre *, do not excite coughing.

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* Nitre ought to be cautiouſly uſed in all complaints of the lungs, on account of the irritation which it produces, and the ſubſequent cough which it excites.

850. From what was obſerved in 795, it will appear, that bliſtering upon the breaſt or back may be a remedy of hemoptyſis, when it is preſent; and that iſſues in the ſame places may be uſeful in preventing the recurrence of it when it has ceaſed.

851. The avoiding of motion is generally a proper part of the antiphlogiſtic regimen; and, in the hemoptyſis, nothing is more neceſſary than avoiding bodily exerciſe: but ſome kinds of geſtation, as ſailing *, and travelling in an eaſy carriage on ſmooth

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* A ſea voyage has often been preſcribed for hemoptyſis: it is, nevertheleſs, a very dangerous practice, on account of the violent agitation produced by the ſea-ſickneſs in the action of vomiting. The violence of the reachings in ſea-ſickneſs, eſpecially after the contents of the ſtomach are throughly evacuated, has been known to cauſe hemoptyſis, by a rupture of ſome conſiderable veſſel. The

ſmooth roads, have often proved a remedy.

852. Such is the treatment I can propoſe for the hemoptyſis, conſidered merely as an hemorrhagy: But when, in ſpite of all our precautions, it continues to recur, it is often followed by an ulceration of the lungs, and a phthiſis pulmonalis. This, therefore, I muſt now proceed to conſider; but, as it ariſes alſo from other cauſes beſides

The hemorrhagy, indeed, hence proceeding, is not an active hemorrhagy; but, nevertheleſs, in a phlogiſtic diatheſis, which prediſpoſes to an active hemorrhagy, we ought always to be cautious how we employ remedies, which, although they do not immediately increaſe the prediſpoſing diatheſis, produce the leaſt irritation, or give any violent ſhock in their action.

Speaking loud, ſinging, playing on wind inſtruments, and whatever requires any exertion of the lungs ought to be carefully avoided.

ſides the hemoptyſis, it muſt be treated of with a more general view *.

CHAP.

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* In the cure of the hemoptyſis, the patient's drink ought to be of the acidulous kind, or of the acidulous and aſtringent kinds conjoined. The vitriolic acid is therefore the moſt eligible, but it ought to be well diluted. A pleaſant drink may be compoſed of one part of the tincture of roſes, and four of cold water: or the tincture of roſes may be preſcribed with five times the quantity of water that is ordered in the pharmacopœia. The acid of tartar diſſolved in twenty times its weight of water, and ſweetened with a little ſyrup of roſes, is alſo a ſuitable drink. A decoction either of the freſh fruit of quinces, ſweetened with ſugar, or an infuſion of quince marmalade, is another excellent acid aſtringent.

In addition to what has been ſaid, it may be proper to obſerve, that opium is admiſſible only in very few caſes of hemoptyſis; viz. when the hemoptyſis is the conſequence of coughing. Theſe caſes are very difficultly diſtinguiſhed. If the blood be thrown out into the lungs, a cough is excited for its diſcharge, and then the hemoptyſis is the primary diſeaſe: in this caſe opium does more harm than good. But if a cough ariſing from any other irritating cauſe, than extravaſated blood in the lungs, ſhould

CHAP. IV.

OF THE

PHTHISIS PULMONALIS,

OR

CONSUMPTION OF THE LUNGS.

SECT. I.

Of the PHENOMENA *and* CAUSES *of the* PHTHISIS PULMONALIS.

853. THE Phthiſis Pulmonalis I would define to be, An expectoration of

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ſhould by its violence and long continuance, produce an hemoptyſis, then opium, joined with ſuch remedies as are ſuitable of pus or purulent matter from the lungs, attended with a hectic fever.

As this is the principal ſpecies of phthiſis, I ſhall frequently in this chapter employ the general term of phthiſis, though ſtrictly meaning the phithiſis pulmonalis.

854. I have met with ſome inſtances of an expectoration of purulent matter, continuing for many years, accompanied with very few ſymptoms of hectic, and at leaſt without any hectic exquiſitely formed: but in none of theſe inſtances were the perſons ſo entirely free from ſymptoms of hectic, as to form any exception to the general definition.

ſuitable to remove the peculiar irritation, is the only medicine on which we can have any reliance; and in theſe caſes we muſt uſe it in large doſes, ſuch as forty or fifty drops of laudanum.

855. In every inſtance of an expectoration of pus, I preſume there is an ulceration of the lungs. The late Mr de Haen is the only author that I know of who has advanced another opinion, and has ſuppoſed, that pus may be formed in the blood-veſſels, and be from thence poured into the bronchiæ. Admitting his fact, I have attempted an explanation of the appearance of pus without ulceration in 349: but, after all, I cannot help ſuſpecting the accuracy of his obſervations; muſt entirely reject his explanation of them; muſt however allow, that we ſtill want facts to ſupport the explanation I have offered; and doubt much if it will apply to any caſe of phthiſis. For theſe reaſons I ſtill conclude, agreeably to the faith of all other diſſections, and the opinions of all phyſicians, that the ſymptoms mentioned in our definition depend always upon an ulceration formed in the lungs.

856. It has ſometimes happened, that a catarrh was attended with an expectoration of a matter ſo much reſembling pus, that phyſicians have been often uncertain whether it was mucus or pus, and therefore whether the diſeaſe was a catarrh or a phthiſis. It is often of conſequence to determine theſe queſtions; and it appears to me that it may be generally done, with ſufficient certainty, from the following conſiderations, of which each particular is not always ſingly deciſive, but when they are taken together can hardly deceive us.

1. From the colour of the matter; as mucus is naturally tranſparent, and pus always opaque. When mucus becomes opaque, as it ſometimes does, it becomes white, yellow, or greeniſh; but the laſt mentioned colour is hardly ever ſo remarkable in mucus as in pus.

2. From the conſiſtence; as mucus is more viſcid and coherent, and pus leſs ſo, and may be ſaid to be more friable. When mucus is thrown into water, it is not readily diffuſed, but remains united in uniform and circular maſſes: but pus, in the ſame circumſtances, though not readily diffuſed, does not remain ſo uniformly united, and by a little agitation is broken into ragged fragments.

3. From the odour; which is ſeldom perceived in mucus, but frequently in pus It has been propoſed to try the odour of the matter expectorated, by throwing it upon live coals: but in ſuch a trial both mucus and pus give out a diſagreeable ſmell, and it is not eaſy to diſtinguiſh between them.

4. From the ſpecific gravity compared with water; and, indeed, it is uſual for the mucus of the lungs to ſwim on the

ſurface of water, and for pus to ſink in it. But in this we may ſometimes be deceived; as pus which has entangled a great deal of air may ſwim, and mucus that is free from air may ſink.

5. From the mixture which is diſcernible in the matter brought up: for if a yellow or greeniſh matter appears ſurrounded with a quantity of tranſparent or leſs opaque and leſs coloured matter, the more ſtrongly coloured matter may be generally conſidered as pus; as it is not eaſy to underſtand how one portion of the mucus of the lungs can be very conſiderably changed, while the reſt of it is very little ſo, or remains in its ordinary ſtate.

6. From the admixture of certain ſubſtances with the matter thrown out from the lungs. To this purpoſe we are informed by the experiments of the late Mr Charles Darwin: (*a.*) That the vitriolic acid diſſolves both mucus and pus, but moſt

readily the former: That, if water be added to ſuch a ſolution of mucus, this is ſeparated, and either ſwims on the ſurface, or, divided into flocculi, is ſuſpended in the liquor; whereas, when water is added to a like ſolution of pus, this falls to the bottom, or by agitation is diffuſed ſo as to exhibit an uniformly turbid liquor. (*b.*) That a ſolution of the cauſtic fixed alkali, after ſome time, diſſolves mucus, and generally pus; and, if water be added to ſuch ſolutions, the pus is precipitated, but the mucus is not. From ſuch experiments it is ſuppoſed, that pus and mucus may be certainly diſtinguiſhed from each other.

7. From the expectoration's being attended with a hectic fever. A catarrh, or expectoration of mucus, is often attended with fever; but never, ſo far as I have obſerved, with ſuch a fever as I am preſently to deſcribe as a hectic. This, in my

opinion, is the moſt certain mark of a purulent ſtate in ſome part of the body; and if others have thought differently, I am perſuaded that it has been owing to this, that, preſuming upon the mortal nature of a confirmed or purulent phthiſis, they have conſidered every caſe in which a recovery happened, as a catarrh only: but, that they may have been miſtaken in this, ſhall be ſhown hereafter.

857. Having thus conſidered the firſt part of the character of the phthiſis pulmonalis as a mark of an ulceration of the lungs; and having juſt now ſaid, that the other part of the character, that is, the hectic fever, is a mark or indication of the ſame thing; it is proper now to conſider this here, as I had with that view omitted it before (74.)

858. A hectic fever has the form of a remittent, which has exacerbations twice

every day. The firſt of theſe occurs about noon, ſometimes a little ſooner or later; and a ſlight remiſſion of it happens about five afternoon. This laſt is ſoon ſucceeded by another exacerbation, gradually increaſing till after midnight: but after two o'clock of the morning a remiſſion takes place, which becomes more and more conſiderable as the morning advances. The exacerbations are frequently attended with ſome degree of cold ſhivering; or at leaſt the patient is exceedingly ſenſible to any coolneſs of the air, ſeeks external heat, and often complains of a ſenſe of cold, when, to the thermometer, his ſkin is preternaturally warm. Of theſe exacerbations, that of the evening is always the moſt conſiderable.

859. It has commonly been given as a part of the character of a hectic fever, that an exacerbation of it commonly appears after the taking food; and it is true that dinner,

ner, which is taken at noon or after it, does ſeem to occaſion ſome exacerbation. But this muſt not make us judge the mid-day exacerbation to be the effect of eating only; for I have often obſerved it come on an hour before noon, and often ſome hours before dinner; which, in this country at preſent, is not taken till ſome time after noon. It is indeed to be obſerved, that, in almoſt every perſon, the taking food occaſions ſome degree of fever: but I am perſuaded this would not appear ſo conſiderable in a hectic, were it not that an exacerbation of fever is preſent from another cauſe; and accordingly, the taking food in the morning has hardly any ſenſible effect.

860. I have thus deſcribed the general form of hectic fever; but many circumſtances attending it, are further to be taken notice of. The fever I have deſcribed does not commonly ſubſiſt long, till the evening exacerbations become attended with

ſweatings; which continue to recur, and to prove more and more profuſe, through the whole courſe of the diſeaſe. Almoſt from the firſt appearance of the hectic, the urine is high-coloured, and depoſites a copious branny red ſediment, which hardly ever falls cloſe to the bottom of the veſſel. In the hectic, the appetite for food is generally leſs impaired than in any other kind of fever. The thirſt is ſeldom conſiderable; the mouth is commonly moiſt; and as the diſeaſe advances, the tongue becomes free from all fur; appears very clean; and in the advanced ſtages of the diſeaſe, the tongue and fauces appear to be ſomewhat inflamed, and become more or leſs covered with aphthæ. As the diſeaſe advances, the red veſſels of the adnata of the eye diſappear, and the whole of the adnata becomes of a pearly white. The face is commonly pale; but, during the exacerbations, a florid red, and an almoſt circumſcribed ſpot, appear on each cheek.

For ſome time, in the courſe of a hectic, the belly it bound; but, in the advanced ſtages of it, a diarrhœa almoſt always comes on, and continues to recur frequently during the reſt of the diſeaſe, alternating in ſome meaſure with the ſweatings mentioned above. The diſeaſe is always attended with a debility, which gradually increaſes during the courſe of it. During the ſame courſe an emaciation takes place, and goes to a greater degree than in almoſt any other caſe. The falling off of the hairs, and the adunque form of the nails, are alſo ſymptoms of the want of nouriſhment. Towards the end of the diſeaſe, the feet are often affected with œdematous ſwellings. The exacerbations of the fever are ſeldom attended with any headach, and ſcarcely ever with delirium. The ſenſes and judgement commonly remain entire to the very end of the diſeaſe; and the mind, for the moſt part, is confident and full of hope. Some days before death, a delirium comes on, and commonly continues to the end.

861. The hectic fever now deſcribed (858, 859.) as accompanying a purulent ſtate of the lungs, is perhaps the caſe in which it moſt frequently appears: but I have never ſeen it in any caſe, when there was not evidently, or when I had not ground to ſuppoſe, there was a permanent purulency or ulceration in ſome external part. It was for this reaſon that in 74. I concluded it to be a ſymptomatic fever only. Indeed, it appears to me to be always the effect of an acrimony abſorbed from abſceſſes or ulcers, although it is not equally the effect of every ſort of acrimony; for the ſcorbutic and cancerous kinds often ſubſiſt long in the body without producing a hectic. What is the preciſe ſtate of the acrimony producing this I cannot determine, but it ſeems to be chiefly that of a vitiated purulency.

862. However this may be, it appears, that the hectic's depending in general upon

an acrimony, explains its peculiar circumſtances. The febrile ſtate ſeems to be chiefly an exacerbation of that frequency of the pulſe, which occurs twice every day to perſons in health, and may be produced by acrimony alone. Theſe exacerbations, indeed, do not happen without the proper circumſtances of pyrexia; but the ſpaſm of the extreme veſſels in a hectic does not ſeem to be ſo conſiderable as in other fevers: and hence the ſtate of ſweat and urine which appears ſo early and ſo conſtantly in hectics. Upon the ſame ſuppoſition of an acrimony corrupting the fluids, and debilitating the moving powers, I think that moſt of the other ſymptoms may alſo be explained.

863. Having thus conſidered the characteriſtical ſymptoms and chief part of the proximate cauſe of the phthiſis pulmonalis, I proceed to obſerve, that an ulcer of the lungs, and its concomitant circum-

ſtance of hectic fever, may ariſe from different previous affections of the lungs; all of which however may, in my opinion, be referred to five heads; that is, 1. To an hemoptyſis; 2. To a ſuppuration of the lungs in conſequence of pneumonia; 3. To catarrh; 4. To aſthma; or, 5. To a tubercle. Theſe ſeveral affections, as cauſes of ulcers, ſhall now be conſidered in the order mentioned.

864. It has been commonly ſuppoſed, that an hemoptyſis was naturally, and almoſt neceſſarily, followed by an ulcer of the lungs: but I will preſume to ſay, that, in general, this is a miſtake; for there have been many inſtances of hemoptyſis occaſioned by external violence, without being followed by any ulcer of the lungs; and there have alſo been many inſtances of hemoptyſis from an internal cauſe without any conſequent ulceration. And this too has been the caſe, not only when the he-

moptyſis happened to young perſons, and recurred for ſeveral times, but when it has often recurred during the courſe of a long life. It is indeed eaſy to conceive, that a rupture of the veſſels of the lungs like that of the veſſels of the noſe, may be often healed, as the ſurgeons ſpeak, by the firſt intention. It is probable therefore, that it is an hemoptyſis in particular circumſtances only, which is neceſſarily followed by an ulcer; but what theſe circumſtances are, it is difficult to determine. It is poſſible, that merely the degree of rupture, or frequently repeated rupture preventing the wound from healing by the firſt intention, may occaſion an ulcer; or it is poſſible that red blood effuſed, and not brought up entirely by coughing, may, by ſtagnating in the bronchiæ, become acrid, and erode the parts. Theſe however are but ſuppoſitions, not ſupported by any clear evidence. And, if we conſider that thoſe caſes of hemoptyſis which follow the prediſpoſition (832, 835.)

835.) are thoſe eſpecially which end in phthiſis, we ſhall be led to ſuſpect that there are ſome other circumſtances which concur here to determine the conſequence of hemoptyſis, as I ſhall hereafter endeavour to ſhow.

865. Any ſuppoſition, however, which we can make with reſpect to the innocence of an hemoptyſis, muſt not ſuperſede the meaſures propoſed above for its cure; both becauſe we cannot certainly foreſee what may be the conſequences of ſuch an accident, and becauſe the meaſures above ſuggeſted are ſafe; for, upon every ſuppoſition, it is a diatheſis phlogiſtica that may urge on every bad conſequence to be apprehended.

866. The ſecond cauſe of an ulceration of the lungs to be conſidered, is a ſuppuration formed in conſequence of pneumonia.

867. From the ſymptoms mentioned in 858, 859, it may with reaſon be concluded, that an abſceſs, or, as it is called, a *vomica*, is formed in ſome part of the pleura, and moſt frequently in that portion of it inveſting the lungs. Here purulent matter frequently remains for ſome time, as if incloſed in a cyſt: but commonly it is not long before it comes to be either abſorbed, and transferred to ſome other part of the body; or that it breaks through into the cavity of the lungs, or the thorax. In the latter caſe, it produces the diſeaſe called *empyema*; but it is only when the matter is poured into the cavity of the bronchiæ, that it properly conſtitutes the phthiſis pulmonalis. In the caſe of empyema, the chief circumſtances of a phthiſis are indeed alſo preſent; but I ſhall here conſider that caſe only in which the abſceſs of the lungs gives occaſion to a purulent expectoration.

868. An abſceſs of the lungs, in conſequence of pneumonia, is not always followed by a phthiſis: for ſometimes a hectic fever is not formed; the matter poured into the bronchiæ is a proper and benign pus, which is frequently coughed up very readily, and ſpit out: and, though this purulent expectoration ſhould continue for ſome time, yet if a hectic does not come on, the ulcer ſoon heals, and every morbid ſymptom diſappears. This has happened ſo frequently, that we may conclude, that neither the acceſs of the air, nor the conſtant motion of the lungs, will prevent an ulcer of theſe parts from healing, if the matter of it be well-conditioned. An abſceſs of the lungs, therefore, does not neceſſarily produce the phthiſis pulmonalis; and if it be followed by ſuch a diſeaſe, it muſt be in conſequence of particular circumſtances which corrupt the purulent matter produced, render it unſuitable to

the healing of the ulcer, and at the ſame time make it afford an acrimony, which, being abſorbed, produces a hectic and its conſequences.

869. The corruption of the matter of ſuch abſceſſes may be owing to ſeveral cauſes; as, 1. That the matter effuſed during the inflammation, had not been a pure ſerum fit to be converted into a laudable pus, but had been united with other matters which prevented that, and gave a conſiderable acrimony to the whole: Or, 2. That the matter effuſed, and converted into pus, either merely by a long ſtagnation in a vomica, or by its connection with an empyema, had been ſo corrupted, as to become unfit for the purpoſe of pus in the healing of the ulcer. Theſe ſeem to be poſſible cauſes of the corruption of matter in abſceſſes, ſo as to make it the occaſion of a phthiſis in perſons otherwiſe ſound; but it is probable, that a pneumonic abſceſs does

eſpecially produce phthiſis when it happens to perſons previouſly diſpoſed to that diſeaſe, and therefore only as it concurs with ſome other cauſes of it.

870. The third cauſe ſuppoſed to produce phthiſis, is a catarrh; which in many caſes ſeems, in length of time, to have the expectoration of mucus proper to it, gradually changed into an expectoration of pus; and at the ſame time, by the addition of a hectic fever, the diſeaſe, which was at firſt a pure catarrh, is converted into a phthiſis. This ſuppoſition, however, is not eaſily to be admitted. The catarrh is properly an affection of the mucous glands of the trachea and bronchiæ, analogous to the coryza, and leſs violent kinds of cynanche tonſillaris, which very ſeldom terminate in ſuppuration. And although a catarrh ſhould be diſpoſed to ſuch termination, yet the ulcer produced might readily heal up, as it does in the caſe of a cynanche tonſillaris;

laris; and therefore ſhould not produce a phthiſis.

871. Further, the catarrh, as purely the effect of cold, is generally a mild diſeaſe, as well as of ſhort duration; and of the numerous inſtances of it, there are at moſt but very few caſes which can be ſaid to have ended in phthiſis. In all thoſe caſes in which this ſeems to have happened, it is to me probable, that the perſons affected were peculiarly prediſpoſed to phthiſis. And the beginning of phthiſis ſo often reſembles a catarrh, that the former may have been miſtaken for the latter. Beſides, to increaſe the fallacy, it often happens that the application of cold, which is the moſt frequent cauſe of catarrah, is alſo frequently the exciting cauſe of the cough which proves the beginning of phthiſis.

872. It is to me, therefore, probable, that a catarrh is very ſeldom the foundation of phthiſis; but I would not poſitively

aſſert that it never is ſo; for it is poſſible that the caſes of a more violent catarrh may have joined with them a pneumonic affection, which may end in a ſuppuration; or it may happen that a long continued catarrh, by the violent agitation of the lungs in coughing, will produce ſome of thoſe tubercles which are preſently to be mentioned as the moſt frequent cauſe of phthiſis.

873. It muſt be particularly obſerved here, that nothing ſaid in 872 ſhould allow us to neglect any appearance of catarrh, as is too frequently done; for it may be either the beginning of a phthiſis, which is miſtaken for a genuine catarrh, or that even as a catarrh continuing long, it may produce a phthiſis, as in 872.

874. Many phyſicians have ſuppoſed an acrimony of the fluids eroding ſome of the veſſels of the lungs, to be a frequent

cauſe of ulceration and phthiſis. But this appears to me to be a mere ſuppoſition: for in any of the inſtances of the production of phthiſis which I have ſeen, there was no evidence of any acrimony of the blood capable of eroding the veſſels. It is true, indeed, that in many caſes an acrimony ſubſiſting in ſome part of the fluids, is the cauſe of the diſeaſe; but it is at the ſame time probable, that this acrimony operates by producing tubercles, rather than by any direct eroſion.

875. It has been mentioned in 863. that an aſthma may be conſidered as one of the cauſes of phthiſis; and by aſthma I mean, that ſpecies of it which has been commonly named the Spaſmodic. This diſeaſe frequently ſubſiſts very long without producing any other, and may have its own peculiar fatal termination, as ſhall be explained hereafter. But I have ſeen it frequently end in phthiſis; and in ſuch caſes

I ſuppoſe it to operate in the manner above alleged of catarrh, that is, by producing tubercles, and their conſequences, which ſhall be preſently mentioned.

876. I come now to conſider the fifth head of the cauſe of phthiſis, and which I apprehend to be the moſt frequent of any. This I have ſaid, in general, to be tubercles; by which term are meant, certain ſmall tumours, which have the appearance of indurated glands. Diſſections have frequently ſhown ſuch tubercles formed in the lungs; and although at firſt indolent, yet at length they become inflamed, and are thereby changed into little abſceſſes, or vomicæ, which breaking, and pouring their matter into the bronchiæ, give a purulent expectoration, and thus lay the foundation of phthiſis.

877. Though the matter expectorated upon theſe occaſions has the appearance of

pus, it is ſeldom that of a laudable kind; and, as the ulcers do not readily heal, but are attended with a hectic fever, for the moſt part ending fatally, I preſume that the matter of the ulcers is imbued with a peculiar noxious acrimony, which prevents their healing, and produces a phthiſis in all its circumſtances, as mentioned above.

878. It is very probable that the acrimony which thus diſcovers itſelf in the ulcers, exiſted before, and produced the tubercles themſelves; and it is to this acrimony that we muſt trace up the cauſe of the phthiſis following theſe tubercles. This acrimony is probably, in different caſes, of different kinds; and it will not be eaſy to determine its varieties: but to a certain length I ſhall attempt it.

879. In one caſe, and that too, a very frequent one, of phthiſis, it appears, that the noxious acrimony is of the ſame kind

with that which prevails in the ſcrophula. This may be concluded from obſerving, that a phthiſis, at its uſual periods, frequently attacks perſons born of ſcrophulous parents; that is, of parents who had been affected with ſcrophula in their younger years: that very often, when the phthiſis appears, there occur at the ſame time ſome lymphatic tumours in the external parts; and very often I have found the tabes meſenterica, which is a ſcrophulous affection, joined with the phthiſis pulmonalis. To all this I would add, that, even when no ſcrophulous affection has either manifeſtly preceded or accompanied a phthiſis, this laſt however moſt commonly affects perſons of a habit reſembling the ſcrophulous; that is, perſons of a ſanguine, or of a ſanguineo-melancholic temperament, who have very fine ſkins, roſy complexions, large veins, ſoft fleſh, and thick upper lip: and further, that in ſuch perſons the phthiſis comes on in the ſame manner that it does in perſons having tubercles, as ſhall be immediately explained.

880. Another ſpecies of acrimony producing tubercles of the lungs, and thereby phthiſis, may be ſaid to be the exanthematic. It is well known, that the ſmall-pox ſometimes, and more frequently the meaſles, lay the foundation of phthiſis. It is probable alſo, that other exanthemata have the ſame effect; and from the phenomena of the diſeaſe, and the diſſections of perſons who have died of it, it is probable, that all the exanthemata may occaſion a phthiſis, by affording a matter which in the firſt place produces tubercles.

881. Another acrimony, which ſeems ſometimes to produce phthiſis, is the ſiphylitic: but whether ſuch an acrimony produces phthiſis in any other perſons than the previouſly diſpoſed, does not appear to me certain.

882. What other ſpecies of acrimony, ſuch as from ſcurvy, from pus abſorbed from other parts of the body, from ſuppreſſed eruptions, or from other ſources, may alſo produce tubercles and phthiſis, I cannot now decide, but muſt leave to be determined by thoſe who have had experience of ſuch caſes.

883. There is one peculiar caſe of phthiſis, which from my own experience I can take notice of. This is the caſe of phthiſis from a calcareous matter formed in the lungs, and coughed up, frequently with a little blood, ſometimes with mucus only, and ſometimes with pus. How this matter is generated, or in what preciſe part of the lungs it is ſeated, I acknowledge myſelf ignorant. In three caſes of this kind which have occurred to me, there was at the ſame time no appearance of ſtony or earthy concretions in any other part of the body.

In one of theſe caſes, an exquiſitely formed phthiſis came on, and proved mortal: while in the other two, the ſymptoms of phthiſis were never fully formed; and after ſome time, merely by a milk diet and avoiding irritation, the patients entirely recovered.

884. Another foundation for phthiſis, analogous, as I judge, to that of tubercles, is that which occurs to certain artificers whoſe employments keep them almoſt conſtantly expoſed to duſt; ſuch as ſtone-cutters, millers, flax-dreſſers, and ſome others. I have not obſerved in this country many inſtances of phthiſis which could be referred to this cauſe; but, from RAMAZZINI, MORGANI, and ſome other writers, we muſt conclude ſuch caſes to be more frequent in the ſouthern parts of Europe.

885. Beſides theſe now mentioned, there are probably ſome other cauſes producing

tubercles, which have not yet been aſcertained by obſervation; and it is likely, that in the ſtate of tubercles there is a variety not yet accounted for: but all this muſt be left to future obſervation and inquiry.

886. It has been frequently ſuppoſed by phyſicians, that the phthiſis is a contagious diſeaſe; and I dare not aſſert that it never is ſuch; but in many hundred inſtances of the diſeaſe which I have ſeen, there has been hardly one which to me could appear to have ariſen from contagion. It is poſſible, that in warmer climates the effects of contagion may be more diſcernible.

After having ſaid that a phthiſis ariſes from tubercles more frequently than from any other cauſe, and after having attempted to aſſign the variety of theſe, I now proceed to mention the peculiar circumſtances and ſymptoms which uſually accompany the coming on of the diſeaſe from tubercles.

887. A tuberculous and purulent ſtate of the lungs has been obſerved in very young children, and in ſome others at ſeveral different periods before the age of puberty and full growth; but inſtances of this kind are rare: and the attack of phthiſis, which we have reaſon to impute to tubercles, uſually happens at the ſame period which I have aſſigned for the coming on of the hemoptyſis.

888. The phthiſis from tubercles does alſo generally affect the ſame habits as the hemoptyſis, that is, perſons of a ſlender make, of long necks, narrow cheſts, and prominent ſhoulders: but very frequently the perſons liable to tubercles have leſs of the florid countenance, and of the other marks of an exquiſitely ſanguine temperament,

perament, than the perſons liable to hemoptyſis.

889. This diſeaſe ariſing from tubercles, uſually commences with a ſlight and ſhort cough, which becomes habitual, is often little remarked by thoſe affected, and ſometimes ſo little as to be abſolutely denied by them. At the ſame time their breathing becomes eaſily hurried by any bodily motion, their body grows leaner, and they become languid and indolent. This ſtate ſometimes continues for a year, or even for two years, without the perſons making any complaint of it, excepting only that they are affected by cold more readily than uſual, which frequently increaſes their cough, and produces ſome cattarh. This, again however, is ſometimes relieved ; is ſuppoſed to have ariſen from cold alone ; and therefore gives no alarm either to the patient or to his frends, nor leads them to take any precautions.

890. Upon one or other of theſe occaſions of catching cold, as we commonly ſpeak, the cough becomes more conſiderable; is particularly troubleſome upon the patient's lying down at night, and in this ſtate continues longer than is uſual in the caſe of a ſimple cattarh. This is more eſpecially to call for attention, if the increaſe and continuance of cough come on during the ſummer ſeaſon.

891. The cough which comes on as in 889, is very often for a long time without any expectoration; but when, from repeatedly catching cold, it becomes more conſtant, it is then at the ſame time attended with ſome expectoration, which is moſt conſiderable in the mornings. The matter of this expectoration becomes by degrees more copious, more viſcid, and more opaque; at length of a yellow or greeniſh colour, and of a purulent appearance. The whole of the matter, however, is not always

at once entirely changed in this manner; but, while one part of it retains the uſual form of mucus, another ſuffers the changes now deſcribed.

892. When the cough increaſes, and continues very frequent through the night, and when the matter expectorated undergoes the changes I have mentioned, the breathing at the ſame time becomes more difficult, and the emaciation and weakneſs go on alſo increaſing. In the female ſex, as the diſeaſe advances, and ſometimes early in its progreſs, the menſes ceaſe to flow; and this circumſtance is to be conſidered as commonly the effect, although the ſex themſelves are ready to believe it the ſole cauſe, of the diſeaſe.

893. When the cough comes on as in 889, the pulſe is often natural, and for ſome time after continues to be ſo; but the ſymptoms have ſeldom ſubſiſted long before the pulſe becomes frequent, and

ſometimes to a conſiderable degree, without much of the other ſymptoms of fever. At length, however, evening exacerbations become remarkable; and by degrees the fever aſſumes the exquiſite form of hectic, as deſcrbed in 858.—860.

894. It is ſeldom that the cough, expectoration, and fever, go on increaſing, in the manner now deſcribed, without ſome pain being felt in ſome part of the thorax. It is uſually and moſt frequently felt at firſt under the ſternum, and that eſpecially, or almoſt only, upon occaſion of coughing: but very often, and that too early, in courſe of the diſeaſe, a pain is felt on one ſide, ſometimes very conſtantly, and ſo as to prevent the perſon from lying eaſily upon that ſide; but at other times the pain is felt only upon a full inſpiration, or upon coughing. Even when no pain is felt, it generally happens that phthiſical perſons cannot lie eaſily on ſome one of their ſides, without having their difficulty

of breathing increaſed, and their cough excited.

895. The phthiſis begins, and ſometimes proceeds to its fatal iſſue, in the manner deſcribed from 889. to 895. without any appearance of hemoptyſis. Such caſes are indeed rare; but it is very common for the diſeaſe to advance far, and even to an evident purulency and hectic ſtate, without any appearance of blood in the ſpitting: ſo that it may be affirmed, the diſeaſe is frequently not founded in hemoptyſis. At the ſame time, we muſt allow, not only that it ſometimes begins with an hemoptyſis, as is ſaid in 864.; but further, that it ſeldom happens that in the progreſs of the diſeaſe more or leſs of an hemoptyſis does not appear. Some degree of blood-ſpitting does, indeed, appear ſometimes in the ſtate mentioned (889. 893.) but more commonly in the more advanced ſtages of the diſeaſe only, and particularly upon the firſt appearance

of purulency. However this may be, it is ſeldom, in the phthiſis from tubercles, that the hemoptyſis is conſiderable, or requires any remedies different from thoſe which are otherwiſe neceſſary for the ſtate of the tubercles.

896. I have now deſcribed a ſucceſſion of ſymptoms which, in different caſes, occupy more or leſs time. In this climate they very often take up ſome years, the ſymptoms appearing eſpecially in the winter and ſpring, commonly becoming eaſier, and ſometimes almoſt diſappearing, during the ſummer: but returning again in winter, they at length, after two or three years, prove fatal, towards the end of ſpring or beginning of ſummer.

897. In this diſeaſe, the prognoſis is for the moſt part unfavourable. Of thoſe affected with it, the greater number die; but there are alſo many of them who recover entirely, after having been in very

unpromiſing circumſtances. What are, however, the circumſtances more certainly determining to a happy or to a fatal event, I have not yet been able to aſcertain.

898. The following aphoriſms are the reſult of my obſervations.

A phthiſis pulmonalis from hempotyſis, is more frequently recovered than one from tubercles.

An hemoptyſis not only is not always followed by a phthiſis, as we have ſaid above (864.); but even when followed by an ulceration, the ulceration is ſometimes attended with little of hectic, and frequently admits of being ſoon healed. Even when the hemoptyſis and ulceration have happened to be repeated, there are inſtances of perſons recovering entirely after ſeveral ſuch repetitions.

A phthiſis from a ſuppuration in conſequence of pneumonic inflammation, is that which moſt rarely occurs in this climate; and a phthiſis does not always follow ſuch ſuppuration, when the abſceſs formed ſoon breaks and diſcharges a laudable pus: but, if the abſceſs continue long ſhut up, and till after a conſiderable degree of hectic has been formed, a phthiſis is then produced, equally dangerous, as that from other cauſes.

A phthiſis from tubercles has, I think, been recovered: but it is of all others the moſt dangerous; and, when ariſing from a hereditary taint, is almoſt certainly fatal.

The danger of a phthiſis, from whatever cauſe it may have ariſen, is moſt certainly to be judged of by the degree to which the hectic and its conſequences have arrived. From a certain degree of emaciation, debility, profuſe ſweating, and diarrhœa, no perſon recovers.

A mania coming on, has been found to remove all the ſymptoms, and ſometimes has entirely cured the diſeaſe; but, in other caſes, upon the going off of the mania, the phthiſis has recurred, and proved fatal.

The pregnancy of women has often retarded the progreſs of a phthiſis; but commonly it is only till after delivery, when the ſymptoms of phthiſis return with violence, and ſoon prove fatal.

SECT. II.

OF THE

CURE

OF

PHTHISIS.

899. FROM what has been juſt now ſaid, it will readily appear, that the cure of the phthiſis pulmonalis muſt be exceeding difficult; and that even the utmoſt care and attention in the employment of remedies, have ſeldom ſucceeded. It may be doubtful whether this failure is to be imputed to the imperfection of our art, or

to the abſolutely incurable nature of the diſeaſe. I am extremely averſe in any caſe to admit of the latter ſuppoſition, and can always readily allow of the former; but, in the mean time, muſt mention here, what has been attempted towards either curing or moderating the violence of this diſeaſe.

900. It muſt be obvious, that according to the different circumſtances of this diſeaſe, the method of cure muſt be different. Our firſt attention ſhould be employed in watching the approach of the diſeaſe, and preventing its proceeding to an incurable ſtate.

In all perſons of a phthiſical habit, and eſpecially in thoſe born of phthiſical parents, the ſlighteſt ſymptoms of the approach of phthiſis, at the phthiſical period of life, ought to be attended to *.

901. When

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* This early attention to the firſt ſymptoms of the diſeaſe is of the utmoſt conſequence, for it is only in the early

901. When an hemoptyſis occurs, though it be not always followed with ulceration and phthiſis, theſe however are always to be apprehended; and every precaution is to be taken againſt them. This is eſpecially to be done by employing every means of moderating the hemorrhagy, and of preventing its return, directed in 792, *et ſeq.* and theſe precautions ought to be continued for ſeveral years after the occurrence of the hemoptyſis.

902. The phthiſis which follows a ſuppuration from the pneumonic inflammation, can only be prevented with certainty, by obtaining a reſolution of ſuch inflammation. What may be attempted towards the cure of an abſceſs and ulcer which have taken place, I ſhall ſpeak of hereafter.

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early ſtage that any remedies can be employed with ſucceſs, as experience has ſufficiently taught. See art. 906, *et ſeq.*

903. I have ſaid, it is doutful if a genuine catarrh ever produces a phthiſis; but have allowed that it poſſibly may: and both upon this account, and upon account of the ambiguity which may ariſe, whether the appearing catarrh be a primary diſeaſe, or the effect of a tubercle, I conſider it as of conſequence to cure a catarrh as ſoon as poſſible after its firſt appearance. More eſpecially when it ſhall linger, and continue for ſome time, or ſhall, after ſome intermiſſion, frequently return, the cure of it ſhould be diligently attempted. The meaſures requiſite for this purpoſe ſhall be mentioned afterwards, when we come to treat of a catarrh as a primary diſeaſe; but, in the mean time, the means neceſſary for preventing its producing a phthiſis ſhall be mentioned immediately, as they are the ſame with thoſe I ſhall point out as neceſſary for preventing a phthiſis from tubercles.

904. The preventing of a phthiſis from aſthma muſt be, by curing, if poſſible, the aſthma, or at leaſt by moderating it as much as may be done: and as it is probable that aſthma occaſions phthiſis, by producing tubercles, the meaſures neceſſary for preventing phthiſis from aſthma, will be the ſame with thoſe neceſſary in the caſe of tubercles, which I am now about to mention.

905. I conſider tubercles as by much the moſt frequent cauſe of phthiſis; and even in many caſes where this ſeems to depend upon hemoptyſis, catarrh, or aſthma, it does however truly ariſe from tubercles. It is upon this ſubject, therefore, that I ſhall have occaſion to treat of the meaſures moſt commonly requiſite for curing phthiſis.

906. When, in a perſon born of phthiſical parents, of a phthiſical habit, at the

phthiſical period of life, the ſymptoms (889.) in the ſpring, or beginning of ſummer, ſhall appear in the ſlighteſt degree, we may preſume that a tubercle, or tubercles, either have been formed, or are forming in the lungs; and therefore, that every means we can deviſe for preventing their formation, or for procuring their reſolution, ſhould be employed immediately, even although the patient himſelf ſhould overlook or neglect the ſymptoms, as imputing them to accidental cold.

907. This is certainly the general indication; but how it may be executed, I cannot readily ſay. I do not know that, at any time, phyſicians have propoſed any remedy capable of preventing the formation of tubercles, or of reſolving them when formed. The analogy of ſcrophula, gives no aſſiſtance in this matter. In ſcrophula the remedies that are ſeemingly of moſt power, are, ſea-water, or certain mineral waters; but theſe have generally proved hurt-

ful in the caſe of tubercles of the lungs. I have known ſeveral inſtances of mercury very fully employed for certain diſeaſes in perſons who were ſuppoſed at the ſame time to have tubercles formed, or forming, in their lungs; but though the mercury proved a cure for thoſe other diſeaſes, it was of no ſervice in preventing phthiſis, and in ſome caſes ſeemed to hurry it on.

908. Such appears to me to be the preſent ſtate of our art, with reſpect to the cure of tubercles; but I do not deſpair of a remedy for the purpoſe being found hereafter. In the mean time, all that at preſent ſeems to be within the reach of our art, is to take the meaſures proper for avoiding the inflammation of tubercles. It is probable that tubercles may ſubſiſt long without producing any diſorder; and I am diſpoſed to think, that nature ſometimes reſolves and diſcuſſes tubercles which have been formed; but that nature does this only when the tubercles remain in an un-

uninflamed ſtate; and therefore, that the meaſures neceſſary to be taken, are chiefly thoſe for avoiding the inflammation of the tubercles.

909. The inflammation of a tubercle of the lungs is to be avoided upon the general plan of avoiding Inflammation, by blood-letting, and by an antiphlogiſtic regimen; the chief part of which, in this caſe, is the uſe of a low diet. This ſuppoſes a total abſtinence from animal food, and the uſing of vegetable food almoſt alone: but it has been found, that it is not neceſſary for the patient to be confined to vegetables of the weakeſt nouriſhment, it being ſufficient that the farinacea be employed, and together with theſe, milk.

910. Milk has been generally conſidered as the chief remedy in phthiſis, and in the caſe of every tendency to it, but whether from its peculiar qualities, or from its being of a lower quality, with reſpect to

nouriſhment, than any food entirely animal, is not certainly determined. The choice and adminiſtration of milk will be properly directed, by conſidering the nature of the milk of the ſeveral animals from which it may be taken, and the particular ſtate of the patient with reſpect to the period and circumſtances of the diſeaſe, and to the habits of his ſtomach with reſpect to milk.

911. A ſecond means of preventing the inflammation of the tubercles of the lungs, is, by avoiding any particular irritation of the affected part which may ariſe from any violent exerciſe of reſpiration; from any conſiderable degree of bodily exerciſe; from any poſition of the body, which ſtraitens the capacity of the thorax; and, laſtly, from cold applied to the ſurface of the body, which determines the blood in greater quantity to the internal parts, and particularly to the lungs.

912. From the laſt mentioned conſideration, the application of cold in general, and therefore the winter-ſeaſon, in cold climates as diminiſhing the cutaneous perſpiration, is to be avoided; but more particularly, that application of cold is to be ſhunned that may ſuppreſs perſpiration, to the degree of occaſioning a catarrh, which conſiſts in an inflammatory determination to the lungs, and may therefore moſt certainly produce an inflammation of the tubercles there.

By conſidering, that the avoiding heat is a part of the antiphlogiſtic regimen above recommended, and by comparing this with what has been juſt now ſaid reſpecting the avoiding cold, the proper choice of climates and ſeaſons for phthiſical patients will be readily underſtood.

913. A third means of avoiding the inflammation of the tubercles of the lungs

conſiſts, in diminiſhing the determination of the blood to the lungs, by ſupporting and increaſing the determination to the ſurface of the body; which is to be chiefly and moſt ſafely done by warm clothing *, and the frequent uſe of the exerciſes of geſtation.

914. Every mode of geſtation has been found of uſe in phthiſical caſes; but riding on horſeback, as being accompanied with a great deal of bodily exerciſe, is leſs ſafe in perſons liable to an hemoptyſis. Travelling in a carriage, unleſs upon very

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[*] This is a moſt eſſential part in the cure of phthiſis, and many other diſeaſes prevalent in cold climates.

The warm clothing that is moſt effectual is flannel ſhirts next the ſkin. It feels a little diſagreeable at firſt to a perſon unaccuſtomed to it; but the great relief it affords, and the comfortable ſenſation it produces, are ſo ſtrong inducements for continuing its uſe, that few people who have once experienced its beneficial effects have any deſire to relinquiſh it.

ſmooth roads may alſo be of doubtful effect; and all the modes of geſtation that are employed on land, may fall ſhort of the effects expected from them, becauſe they cannot be rendered ſufficiently conſtant; and therefore it is that ſailing, of all other modes of geſtation, is the moſt effectual in pneumonic caſes, as being both the ſmootheſt and moſt conſtant.

It has been imagined, that ſome benefit is derived from the ſtate of the atmoſphere upon the ſea; but I cannot find that any impregnation of this which can be ſuppoſed to take place, can be of ſervice to phthiſical perſons. It is however probable, that frequently ſome benefit may be derived from the more moderate temperature and greater purity of the air upon the ſea.

915. In order to take off any inflammatory determination of the blood into the veſſels of the lungs, bliſters applied to ſome part of the thorax may often be of ſervice;

and for the ſame purpoſe, as well as for moderating the general inflammatory ſtate of the body, iſſues of various kinds may be employed with advantage.

916. The ſeveral meaſures to be purſued in the caſe of what is properly called an Incipient Phthiſis, have now been mentioned; but they have ſeldom been employed in ſuch caſes in due time, and have therefore, perhaps, ſeldom proved effectual. It has more commonly happened, that after ſome time, an inflammation has come upon the tubercle, and an abſceſs has been formed, which opening into the cavity of the bronchiæ, has produced an ulcer, and a confirmed phthiſis.

917. In this ſtate of matters, ſome new indications may be ſuppoſed to ariſe; and indications for preventing abſorption, for preventing the effects of the abſorbed matter upon the blood, and for healing the ulcer, have been actually propoſed. I cannot

not find, however, that any of the means propoſed for executing theſe indications, are either probable or have proved effectual. If, upon ſome occaſions, they have appeared to be uſeful, it has been probably by anſwering ſome other intention.

While no antidote againſt the poiſon which eſpecially operates here, ſeems to have been as yet found out, it appears to me, that too great a degree of inflammation has a great ſhare in preventing the healing of the ulcer which occurs; and ſuch inflammation is certainly what has a great ſhare in urging on its fatal conſequences. The only practice, therefore, which I can venture to propoſe, is the ſame in the ulcerated as in the crude ſtate of a tubercle; that is, the employment of means for moderating inflammation, which have been already mentioned (909, *et ſeq.*)

918. The balſamics, whether natural or artificial, which have been ſo commonly

adviſed in caſes of phthiſis, appear to me to have been propoſed upon no ſufficient grounds, and to have proved commonly hurtful. The reſinous and acrid ſubſtance of myrrh, lately recommended, has not appeared to me to be of any ſervice, and in ſome caſes to have proved hurtful *.

919. Mercury, ſo often uſeful in healing ulcers, has been ſpeciouſly enough propoſed in this diſeaſe; but whether that it be not adapted to the particular nature of the ulcers of the lungs occurring in phthiſis, or that it proved hurtful becauſe it cannot have effect, without exciting ſuch an inflammatory ſtate of the whole ſyſtem, as, in a hectic ſtate, muſt prove very hurtful, I cannot determine, upon many

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* From the preceding account of the diſeaſe, it is ſufficiently evident that all acrid and hot ſubſtances muſt be hurtful in phthiſis. The balſamics have been long recommended in theſe caſes, even by the beſt authorities, but on what principle is not eaſy to determine.

many trials which I have ſeen made, it has proved of no ſervice, and commonly has appeared to be manifeſtly pernicious.

920. The Peruvian bark has been recommended for ſeveral purpoſes in phthiſical caſes; and is ſaid, upon ſome occaſions to have been uſeful; but I have ſeldom found it to be ſo; and as by its tonic power it increaſes the phlogiſtic diatheſis of the ſyſtem, I have frequently found it hurtful. In ſome caſes, where the morning remiſſions of the fever were conſiderable, and the noon exacerbations well marked, I have obſerved the Peruvian bark given large quantities, have the effect of ſtopping theſe exacerbations, and at the ſame time of relieving the whole of the phthiſical ſymptoms: but in the caſes in which I obſerved this, the fever ſhowed a conſtant tendency to recur; and at length the phthiſical ſymptoms alſo returned, and proved quickly fatal.

921. Acids of all kinds, as antiſeptic and refrigerant, are uſeful in caſes of phthiſis; but the native acid of vegetables * is more uſeful than the foſſil acids, as it can be given in much larger quanties, and may alſo be given more ſafely than vinegar, being leſs liable to excite coughing.

922. Though our art can do ſo little towards the cure of this diſeaſe, we muſt, however, palliate the uneaſy ſymptoms of it as well as we can. The ſymptoms eſpecially urgent, are the cough and diarrhœa. The cough may be in ſome meaſure relieved by demulcents, (873); but the relief obtained by theſe is imperfect and tranſitory, and very often the ſtomach is diſturbed by the quantity of oily, mucilaginous, and

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* The acid fruits, acid of tartar, acid of ſorrel, and other plants yielding an acid, but not an acrid, juice. The eating of oranges is therefore ſerviceable.

and ſweet ſubſtances, which are on theſe occaſions taken into it.

923. The only certain means of relieving the cough, is by employing opiates. Theſe, indeed, certainly increaſe the phlogiſtic diatheſis of the ſyſtem; but commonly they do not ſo much harm in this way, as they do ſervice by quieting the cough, and giving ſleep. They are ſuppoſed to be hurtful by checking expectoration: but they do it for a ſhort time only; and, after a ſound ſleep, the expectoration in the morning is more eaſy than uſual. In the advanced ſtate of the diſeaſe, opiates ſeem to increaſe the ſweatings that occur; but they compenſate this, by the eaſe they afford in a diſeaſe which cannot be cured.

924. The diarrhœa which happens in the advanced ſtate of this diſeaſe, is to be palliated by moderate aſtringents, mucilages, and opiates.

Rhubarb, ſo commonly preſcribed in every diarrhœa, and all other purgatives, are extremely dangerous in the colliquative diarrhœa of hectics.

Freſh ſubacid fruits, ſuppoſed to be always laxative, are often in the diarrhœa of hectics, by their antiſeptic quality, very uſeful.

CHAP. V.

OF THE

HEMORRHOIS,

OR, OF THE

HEMORRHOIDAL SWELLING AND FLUX.

SECT. I.

Of the PHENOMENA *and* CAUSES *of the* HEMORRHOIS.

925. A DISCHARGE of blood from ſmall tumours on the verge of the anus, is the ſymptom which generally conſtitutes the Hemorrhois; or, as it is vulgarly called, the Hemorrhoidal Flux. But

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a diſcharge of blood from within the anus, when the blood is of a florid colour, ſhowing it to have come from no great diſtance, is alſo conſidered as the ſame diſeaſe; and phyſicians have agreed in making two caſes or varieties of it, under the names of External and Internal Hemorrohois.

926. In both caſes it is ſuppoſed that the flow of blood is from tumours previouſly formed, which are named Hemorrhoids, or Piles; and it frequently happens, that the tumours exiſt without any diſcharge of blood; in which caſe, however, they are ſuppoſed to be a part of the ſame diſeaſe, and are named Hemorrhoides Cæcæ, or Blind Piles.

927. Theſe tumours, as they appear without the anus, are ſometimes ſeparate, round, and prominent, on the verge of the anus; but frequently the tumour is only

one tumid ring, forming, as it were, the anus puſhed without the body.

928. Theſe tumours, and the diſcharge of blood from them, ſometimes come on as an affection purely topical, and without any previous diſorder in other parts of the body: but it frequently happens, even before the tumours are formed, and more eſpecially before the blood flows, that various diſorders are felt in different parts of the body, as headach, vertigo, ſtupor, difficulty of breathing, ſickneſs, colic-pains, pain of the back and loins; and often, together with more or fewer of theſe ſymptoms, there occurs a conſiderable degree of pyrexia.

The coming on of the diſeaſe with theſe ſymptoms, is uſually attended with a ſenſe of fullneſs, heat, itching, and pain in and about the anus.

Sometimes the diſeaſe is preceded by a diſcharge of ſerous matter from the anus:

and ſometimes this ſerous diſcharge, accompanied with ſome ſwelling, ſeems to be in place of the diſcharge of blood, and to relieve thoſe diſorders of the ſyſtem which we have mentioned. This ſerous diſcharge, therefore, has been named the Hemorrhois Alba.

929. In the hemorrhois, the quantity of blood diſcharged is different upon different occaſions. Sometimes the blood flows only upon the perſon's going to ſtool; and commonly, in larger or leſſer quantity, following the diſcharge of the fæces. In other caſes, the blood flows without any diſcharge of fæces; and then, generally, it is after having been preceded by the diſorders above mentioned, when it is alſo commonly in larger quantity. This diſcharge of blood is often very conſiderable; and, by the repetition, it is often ſo great, as we could hardly ſuppoſe the body to bear but with the hazard of life. Indeed, though rarely,

it has been ſo great as to prove ſuddenly fatal. Theſe conſiderable diſcharges occur eſpecially to perſons who have been frequently liable to the diſeaſe. They often induce great debility; and frequently a leucophlegmatia, or dropſy, which proves fatal.

The tumours and diſcharges of blood in this diſeaſe, often recur at exactly ſtated periods.

930. It often happens, in the decline of life, that the hemorrhoidal flux, formerly frequent, ceaſes to flow; and, upon that event, it generally happens that the perſons are affected with apoplexy or palſy.

931. Sometimes hemorrhoidal tumours are affected with conſiderable inflammation; which, ending in ſuppuration gives occaſion to the formation of fiſtulous ulcers in thoſe parts.

932. The hemorrhoidal tumours have been often conſidered as varicous tum-

ours or dilatations of veins; and it is true, that in ſome caſes varicous dilatations have appeared upon diſſection. Theſe, however, do not always appear; and I preſume it is not the ordinary caſe, but that the tumours are formed by an effuſion of blood in the cellular texture of the inteſtine near to its extremity. Theſe tumours, eſpecially when recently formed, frequently contain fluid blood; but, after they have remained for ſome time, they are commonly of a firmer ſubſtance.

933. From a conſideration of their cauſes, to be hereafter mentioned, it is ſufficiently probable, that hemorrhoidal tumours are produced by ſome interruption of the free return of blood from the veins of the lower extremity of the rectum; and it is poſſible, that a conſiderable accumulation of blood in theſe veins, may occaſion a rupture of their extremities, and thus produce the hemorrhagy or tumours I have mentioned. But conſidering that the hemorrhagy occuring here is often preceded

by pain, inflammation, and a febrile ſtate, as well as by many other ſymptoms which ſhow a connection between the topical affection and the ſtate of the whole ſyſtem, it ſeems probable that the interruption of the venous blood, which we have ſuppoſed to take place, operates in the manner explained in 769.; and therefore, that the diſcharge of blood here is commonly from arteries.

934. Some phyſicians have been of opinion, that a difference in the nature of the hemorrhois, and of its effects upon the ſyſtem, might ariſe from the difference of the hemorrhoidal veſſels from which the blood iſſued. But it appears to me, that hardly in any caſe we can diſtinguiſh the veſſels from which the blood flows; and that the frequent inoſculations, of both the arteries and veins which belong to the lower extremity of the rectum, will render the effects of the hemorrhagy nearly the ſame, from whichſoever of theſe veſſels the blood proceed.

935. In 769. I have endeavoured to explain the manner in which a certain ſtate of the ſanguiferous ſyſtem might give occaſion to an hemorrhoidal flux; and I have no doubt, that this flux may be produced in that manner. I cannot, however, by any means admit that the diſeaſe is ſo often produced in that manner, or that, on its firſt appearance, it is ſo frequently a ſyſtematic affection, as the Stahlians have imagined, and would have us to believe. It occurs in many perſons before the period of life at which the venous plethora takes place: it happens to females in whom a venous plethora, determined to the hemorrhoidal veſſels, cannot be ſuppoſed; and it happens to both ſexes, and to perſons of all ages from cauſes which do not effect the ſyſtem, and are manifeſtly ſuited to produce a topical affection only.

936. Theſe cauſes of a topical affection are, in the firſt place, the frequent voiding of hard and bulky fæces, which, not only by their long ſtagnation in the rectum, but eſpecially

ſpecially when voided, muſt preſs upon the veins of the anus, and interrupt the courſe of the blood in them. It is for this reaſon that the diſeaſe happens ſo often to perſons of a ſlow and bound belly.

937. From the cauſes juſt now mentioned, the diſeaſe happens eſpecially to perſons liable to ſome degree of a prolapſus ani. Almoſt every perſon in voiding fæces has the internal coat of the rectum more or leſs protruded without the body; and this will be to a greater or leſſer degree, according as the hardneſs and bulk of the fæces occaſion a greater or leſſer effort or preſſure upon the anus. While the gut is thus puſhed out, it often happens that the ſphincter ani is contracted before the gut is replaced; and, in conſequence a ſtrong conſtriction is made, which preventing the fallen-out gut from being replaced, and at the ſame time preventing the return of the blood from it, occaſions its being conſiderably ſwelled, and its forming a tumid ring round the anus.

938. Upon the ſphincter's being a little relaxed, as it is immediately after its ſtrong contraction, the fallen-out portion of the gut is commonly again taken within the body; but, by the frequent repetition of ſuch an accident, the ſize and fullneſs of the ring formed by the fallen-out gut, is much increaſed. It is therefore more ſlowly and difficultly replaced; and in this conſiſts the chief uneaſineſs of hemorrhoidal perſons.

939. As the internal edge of the ring mentioned, is neceſſarily divided by clefts, the whole often aſſumes the appearance of a number of diſtinct ſwellings; and it alſo frequently happens, that ſome portions of it more conſiderably ſwelled than others, become more protuberant, and form thoſe ſmall tumours more ſtrictly called Hemorrhoids, or Piles.

940. From conſidering that the preſſure of the fæces, and other cauſes interrupting the return of venous blood from the lower ex-

tremity of the rectum, may operate a good deal higher up in the gut than that extremity, it may be eaſily underſtood that tumours may be formed within the anus; and probably it alſo happens, that ſome of the tumours formed without the anus, as in 939. may continue when taken within the body, and even be increaſed by the cauſes juſt now mentioned. It is thus that I would explain the production of internal piles, which, on account of their ſituation and bulk, are not protruded on the perſons going to ſtool, and are often therefore more painful. The ſame internal piles are more eſpecially painful, when affected by the hemorrhagic effort deſcribed in 745, and 769.

941. The production of piles is particularly illuſtrated by this, that pregnant women are frequently affected with them. This is to be accounted for, partly from the preſſure of the uterus upon the rectum, and partly from the coſtive habit to which pregnant women are uſually liable. I have

known many inſtances of piles occurring for the firſt time during the ſtate of pregnancy; and there are few women that have born children who are afterwards entirely free from piles. The Stahlians have commonly aſſerted, that the male ſex is more frequently affected with this diſeaſe than the female; but in this country I have conſtantly found it otherwiſe.

942. It is commonly ſuppoſed, that the frequent uſe of purgatives, eſpecially of thoſe of the more acrid kind, and more particularly of aloetics, is apt to produce the hemorrhoidal affection; and as theſe purgatives ſtimulate chiefly the great guts, it ſeems ſufficiently probable that they may excite this diſeaſe.

943. I have now mentioned ſeveral cauſes which may produce the hemorrhoidal tumours and flux as a topical affection only; but muſt obſerve farther, that although the diſeaſe appears firſt as a purely topical affection, it may, by frequent repetion,

tion, become habitual, and therefore may become connected with the whole ſyſtem, in the manner already explained, with reſpect to hemorrhagy in general, in 748.

944. The doctrine now referred to, will it is apprehended, apply very fully to the caſe of the hemorrhoidal flux; and will the more readily apply, from the perſon who has been once affected being much expoſed to a renewal of the cauſes which firſt occaſioned the diſeaſe; and from many perſons being much expoſed to a congeſtion in the hemorrhoidal veſſels, in conſequence of their being often in an erect poſition of the body, and in an exerciſe which puſhes the blood into the depending veſſels, while at the ſame time the effects of theſe circumſtances are much favoured by the abundance and laxity of the cellular texture about the rectum.

945. It is thus that the hemorrhoidal flux is ſo often artificially rendered an habitual and ſyſtematic affection; and I am

perſuaded, that it is this which has given occaſion to the Stahlians to conſider the diſeaſe as almoſt univerſally ſuch.

946. It is to be particularly obſerved here, that when the hemorrhoidal diſeaſe has either been originally, or has become, in the manner juſt now explained, a ſyſtematic affection, it then acquires a particular connection with the ſtomach, ſo that certain affections there excite the hemorrhoidal diſeaſe, and certain ſtates of the hemorrhoidal affections excite diſorders of the ſtomach.

It is perhaps owing to this connection, that the gout ſometimes affects the rectum. See 525.

SECT. II.

OF THE

CURE

OF

HEMORRHOIDAL AFFECTIONS.

947. Almost at all times it has been an opinion amongſt phyſicians, and from them ſpread amongſt the people, that the hemorrhoidal flux is a ſalutary evacuation, which prevents many diſeaſes that would otherwiſe have happened; and that even

contributes to give long life. This opinion, in later times, has been eſpecially maintained by Dr Stahl, and his followers; and has had a great deal of influence upon the practice of phyſic in Germany.

948. The queſtion ariſes with reſpect to hemorrhagy in general, and indeed it has been extended ſo far by the Stahlians. I have accordingly conſidered it as a general queſtion (767.—780), but it has been more eſpecially agitated with regard to the diſeaſe now under our conſideration: And as to this, although I am clearly of opinion that the hemorrhois may take place in conſequence of the general ſtate of the ſyſtem (769), or, what is ſtill more frequent, that by repetition it may become connected with that general ſtate (943), and in either caſe cannot be ſuppreſſed without great caution; I muſt beg leave, notwithſtanding this, to main-

tain, that the firſt is a rare caſe; that generally the diſeaſe firſt appears as an affection purely topical (935, 942), and that the allowing it to become habitual is never proper. It is a naſty diſagreeable diſeaſe, ready to go to exceſs, and to be thereby very hurtful, as well as ſometimes fatal. At beſt it is liable to accidents, and thereby to unhappy conſequences. I am therefore of opinion, that not only the firſt approaches of the diſeaſe are to be guarded againſt, but even that, when it has taken place for ſome time, from whatever cauſe it may have proceeded, the flux is always to be moderated, and the neceſſity of it ,if poſſible, ſuperſeded.

947. Having delivered theſe general rules, I proceed to mention more particularly, how the diſeaſe is to be treated, according to the different circumſtances under which it may appear.

When we can manifeſtly diſcern the firſt appearance of the diſeaſe to ariſe from cauſes acting upon the part only, the ſtricteſt attention ſhould be employed in guarding againſt the renewal of theſe cauſes.

950. One of the moſt frequent of the remote cauſes of the hemorrhoidal affection, is a ſlow and bound belly, (936): and this is to be conſtantly obviated by a proper diet *, which each individual's own experience muſt direct; or, if the management of diet be not effectual, belly muſt be kept regular by ſuch medicines as may prove gently laxative, without irritating the rectum †. In moſt caſes

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[*] Broths of all kind are proper in theſe caſes: barley broth is preferable to that which is made with rice. Barley gruel, with prunes, is an excellent laxative broth.

[†] The lenitive electuary alone may in many caſes be ſufficient, when given in the quantity of half an ounce or ſix

caſes it will be of advantage to acquire a habit with reſpect to time, and to obſerve it exactly.

951. Another cauſe of hemorrhois to be eſpecially attended to, is the prolapſus or protruſion of the anus, which is apt to happen on a perſon's having a ſtool, (937). If it ſhall occur to any conſiderable degree, and at the ſame time be not eaſily and immediately replaced, it moſt certainly produces piles, or increaſes them when otherwiſe produced. Perſons therefore liable to this prolapſus, ſhould, upon their having been at ſtool, take great pains to have the gut immediately replaced, by lying

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ſix drams. The following formula may be uſed where greater coſtiveneſs prevails:

R. Sal. Nitri, ʒ ii.
Pulv. Jalap. ʒ i.
Elect. Lenitivi, ℥ i.
M. f. Elect. cujus ſumat q. n. m. pro re nata.

lying down in a horizontal poſture, and preſſing gently upon the anus, till the reduction ſhall be completely obtained.

When the prolapſus of which I ſpeak, is occaſioned only by voiding hard and bulky fæces, it ſhould be obviated by the means mentioned in 950, and may be thereby avoided. But in ſome perſons it is owing to a laxity of the rectum; in which caſe it is often moſt conſiderable upon occaſion of a looſe ſtool: and then the diſeaſe is to be treated by aſtringents *, as well as by proper artifices for preventing the falling down of the gut.

953. Theſe are the means to be employed upon the firſt approaches of the hemorrhoidal affection; and when from neglect it

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* Aſtringents may be uſed both internally and externally. The internal aſtringents are Alum, Kino, Terra Japonica, &c. But in caſes of hemorrhoids from laxity, nothing produces a better effect, than the frequent application of pledgets, dipped in a ſtrong infuſion of galls, or Oak bark.

it ſhall have frequently recurred, and has become in ſome meaſure eſtabliſhed, they are no leſs proper. In the latter caſe, however, ſome other means are alſo neceſſary. It is particularly proper to guard againſt a plethoric ſtate of the body; conſequently, to avoid a ſedentary life, a full diet, and particularly intemperance in the uſe of ſtrong liquor, which, as I ſhould have obſerved before, is, in all caſes of hemorrhagy, of the greateſt influence in increaſing the diſpoſition to the diſeaſe.

954. I need hardly repeat here, that exerciſe of all kinds muſt be a chief means of obviating and removing a plethoric ſtate of the body; but upon occaſion of the hemorrhoidal flux immediately approaching, both walking and riding, as increaſing the determination of the blood into the hemorrhoidal veſſels, are to be avoided. At other times, when no ſuch determination has been already formed,

thoſe modes of exerciſe may be very properly employed*.

955. Cold bathing is another remedy that may be employed to obviate plethora, and prevent hemorrhagy; but it is to be uſed with caution. When the hemorrhoidal flux is approaching, it may be dangerous to turn it ſuddenly aſide by cold bathing: but during the intervals of the diſeaſe, this remedy may be employed with advantage; and in perſons liable to a prolapſus ani, the frequent waſhing of the anus with cold water may be very uſeful.

956. Theſe are the means for preventing the recurrence of the hemorrhoidal flux; and in all caſes, when it is not immediately approaching, they are to be employed: When it has actually come on, means are to be employed for modera-

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* It is doubtful whether riding is ever adviſable in any period of the diſeaſe. Riding frequently produces Piles, in perſons not in the leaſt prediſpoſſed to them.

ting it as much as poſſible, by the perſon's lying in a horizonal poſition upon a hard bed; by avoiding exerciſe in an erect poſture; by uſing a cool diet; by avoiding external heat; and by obviating the irritation of hardened fæces by the uſe of proper laxatives, (950.) From what has been ſaid above, as to the being careful not to increaſe the determination of the blood into the hemorrhoidal veſſels, the propriety of theſe meaſures muſt ſufficiently appear; and if they were not ſo generally neglected, many perſons would eſcape the great trouble, and the various bad conſequences, which ſo frequently reſult from this diſeaſe.

957. With reſpect to the further cure of this diſeaſe, it is almoſt in two caſes only that hemorrhoidal perſons call for the aſſiſtance of the phyſician. The one is when the affection is accompanied with much pain; and of this there are two caſes, according as the pain happens to attend the external or the internal piles.

958. The pain of the external piles ariſes eſpecially when a conſiderable protruſion of the rectum has happened; and when, continuing unreduced, it is ſtrangled by the conſtriction of the ſphincter; while, at the ſame time, no bleeding happens, to take off the ſwelling of the protruded portion of the inteſtine. Sometimes an inflammation ſupervenes, and greatly aggravates the pain. To relieve the pain in this caſe, emollient fomentations and poultices are ſometimes of ſervice; but a more effectual relief is to be obtained by applying leeches to the tumid parts.

959. The other caſe in which hemorrhoidal perſons ſeek aſſiſtance, is that of exceſſive bleeding. Upon the opinion ſo generally received of this diſcharge being ſalutary, and from the obſervation that upon the diſcharge occuring, perſons have ſometimes found relief from various diſorders, the moſt part of perſons liable to it are ready to let it go too far; and

indeed the Stahlians will not allow it to be a diſeaſe, unleſs when it has actually gone to exceſs. I am, however, well perſuaded, that this flux ought always to be cured as ſoon as poſſible.

960. When the diſeaſe occurs as a purely topical affection, there can be no doubt of the propriety of this rule; and, even when it has occured as a critical diſcharge in the caſe of a particular diſeaſe: yet when this diſeaſe ſhall have been entirely cured and removed, the preventing any return of the hemorrhois ſeems to be both ſafe and proper.

961. It is only when the diſeaſe ariſes from a plethoric ſtate of the body, and from a ſtagnation of blood in the hypochondriac region, or when, though originally topical, the diſeaſe, by frequent repetition, has become habitual, and has thereby acquired a connection with the whole ſyſtem, that any doubt can ariſe as to the ſafety of curing it entirely.

Even in theſe caſes, however, I apprehend it will be always proper to moderate the bleeding; leſt by its continuance or repetition, the plethoric ſtate of the body, and the particular determination of the blood into the hemorrhoidal veſſels, be increaſed, and the recurrence of the diſeaſe, with all its inconveniences and danger, be too much favoured.

962. Further, even in the caſes ſtated, (961.), in ſo far as the plethoric ſtate of the body, and the tendency to that ſtate, can be obviated and removed, this is always to be diligently attempted; and if it can executed with ſucceſs, the flux may be entirely ſuppreſſed.

963. The Stahlian opinion, that the hemorrhoidal flux is only in exceſs when it occaſions great debility, or a leucophlegmatia, is by no means juſt; and it appears to me, that the ſmalleſt approach towards *producing* either of theſe, ſhould be con-

ſidered as an exceſs, which ought to be prevented from going farther.

964. In all caſes, therefore, of exceſs, or of any approach towards it, and particularly when the diſeaſe depends upon a prolapſus ani (951.), I am of opinion that aſtringents, both internal and external, may be ſafely and properly employed; not indeed to induce an immediate and total ſuppreſſion, but to moderate the hemorrhagy, and by degrees to ſuppreſs it altogether, while at the ſame time meaſures are taken for removing the neceſſity of its recurrence.

965. When the circumſtances (946.) marking a connection between the hemorrhoidal affection and the ſtate of the ſtomach occur, the meaſures neceſſary are the ſame as in the caſe of atonic gout.

THE END OF THE SECOND VOLUME.